INTERNATIONAL
MEDICAL MAGAZINE.

VOL. VIII.] AUGUST, 1899. [NO. 8.

ORIGINAL PAPERS.

FEVER AND ITS TREATMENT.[1]

BY H. A. HARE, M.D.,
Professor of Materia Medica and Therapeutics, Jefferson Medical College, Philadelphia, etc.

WHEN the kind invitation to address you to-day was extended to me some six or eight weeks ago by your very efficient secretary, he also intimated that it would be agreeable for me to discuss, in a paper which should be exceedingly brief, the important and very interesting subject of fever and its treatment.

It is not necessary for me, in the presence of the audience which I am now addressing, to remind my hearers that medicine no longer recognizes the presence of fever as a disease in itself, but insists that in every case a diagnosis should be made as to the cause of the increase in the bodily temperature of the patient, so that at the present time a statement that a certain patient died of fever is as unscientific as the statement which we see so commonly in the daily press, that he died from heart failure.

In both instances, the scientific medical man knows full well that, underlying the failure of the heart and the development of pyrexia, there has been a pathological process which has produced the fatal result. At the same time, an abnormally high bodily temperature is in many diseases the most manifest symptom with which we have to deal, and in the practice of medicine it becomes our duty not only to treat the cause of the disease but, as far as possible, to ameliorate or modify its symptoms so that they will not give annoyance to the patient or do him actual damage. The profession of medicine has just passed through an epoch in which many of its ablest leaders strongly insisted that fever was a distinctly harmful process, always to be combatted, even when in a mild form; and forcible pictures have been drawn of the grave pathological changes which resulted in tissues

[1] Paper read before the Berks Co. Medical Society.

which had been exposed to temperatures very little above those which are associated with normal conditions. For this reason, antipyretic measures of all sorts and kinds have been resorted to within the memory of almost every hearer present, and much of the seeking after antipyretic drugs has been aided by the advertisements which have been distributed by the manufacturers of the various coal-tar products which possess the peculiar power of lowering abnormal bodily temperatures.

In other words, the position of the profession has been to go to the extreme from that which was held by their forefathers; for it is not to be forgotten that for many years a certain number of physicians at least regarded fever not only as a harmless but as an actual protective process, devised by nature to aid the patient in his struggle against his ailment; and as long ago as the time of Hippocrates that individual expressed the belief that fever was a protective process. It seems to me that our guide in regard to fever should be a rule similar to that which the careful physician follows in the treatment of any disease or important symptom, namely, the rule of moderation; or, in other words, that he shall consider fever as being by no means a distinctly harmful process until it becomes excessive and capable of doing actual damage by raising the temperature of the tissues dangerously near that at which coagulation of their protoplasm takes place.

As a rule in medicine, as in everything else, the skillful physician will not follow the claims of those who, on the one hand, assure us that all fever is evil; or, on the other hand, that fever is harmless; but he will follow the middle path, in which he will recognize that sometimes it is harmless and sometimes it is capable of doing great damage. The occasions on which it is harmless will be those in which the temperature does not exceed 102½° or 103° at the most; and those in which it is harmful will be those on which it runs from 103° to 105°. It is also to be remembered that the duration of the fever and the character of its cause seriously modifies the question as to whether its existence is dangerous to the patient, for we can readily understand that a patient with a fever of 102° or 103°, continued for three or four weeks, as it is in typhoid, might in the end receive injury; whereas a patient with a temperature of 104° or 105°, during some acute ailment which only lasts a few hours or a few days, could stand this hyperpyrexia without material damage. I therefore can express the views which I wish to bring before you to-day in three propositions:

First, that fever when excessive or prolonged is harmful.

Second, that moderate fever, not too prolonged, may be of distinct advantage to the patient.

Third, that moderate fever, not too prolonged, even if it is not advantageous, may be, on the other hand, not deleterious; but may be regarded by the physician without any anxiety as a characteristic concomitant symptom which we would naturally expect to find in a patient suffering from the disease which is present in the patient's system.

I shall not devote myself to the consideration of the ways in which excessive or prolonged fever is capable of doing harm to the tissues of the body, I shall merely state in passing, and for the purpose of promoting the discussion, which I understand is to follow my paper, my firm belief in the fact that the application of cold water, the temperature varying with the necessities of the case, is by long odds the most efficient means that we have for reducing temperatures which we believe to be harmful to our patients; whether these temperatures be hyperpyrexia of acute illnesses, or whether they be manifestations of more prolonged maladies; and, secondly, I desire to emphasize a point which I believe is too frequently ignored in the use of cold water in the treatment of fevers, namely, the necessity of always resorting to active rubbing or friction of the body and extremities of the patient, while cold water is being employed, for the double purpose of maintaining the circulation by equalizing it and of bringing the hot blood to the surface so that it may be cooled, for, as we all know, the application of cold to the surface of the body causes contraction of the peripheral capillaries and the congestion of the internal viscera, where it is impossible for the cold applications to the surface to materially reduce the temperature. These cold applications do good not only by abstracting heat from the body, but they also do good by improving the nervous tone of the patient, and, what is very much more important, they improve the tone of his vascular system, the friction preventing any tendency to congestion or stasis in important organs, such as the liver, lungs and kidneys. In the ordinary infectious diseases with high fever the vascular system too often becomes disorganized and lacking in elasticity, just as a hollow rubber ball will become brittle and inelastic if kept motionless for a long period of time; whereas, if the rubber is exercised each day, by squeezing it in the hand, it will maintain its elasticity indefinitely. By means of the cold bath, or sponging, the blood vessels have their elasticity maintained and the circulatory apparatus is therefore kept in good condition. Some of you may have seen a paper which I published some two years ago, entitled, "The Vaso-motor System as a Factor in Disease," in which I emphasized the fact that the condition of the blood-vessels and their nerve supply is as important to life as is the condition of the heart.

That mere high temperature is not always a harmful agent has been proved again and again, not only in clinical medicine, but in the experimental laboratory. The experiments of Welch in America and Naunyn in Europe show that animals can bear temperatures artificially induced which far exceed the normal, provided there be no additional strain thrown upon the organism by an infectious process, and I would like to present the following views as supporting the theory that in some instances fever is actually a protective process.

First, fever is a condition developed in all healthy animals as soon as they undertake, as do all healthy animals, to resist infection; and while

it may be urged that it is a coincident symptom, this hardly seems probable in view of its importance, for nature would hardly devise a plan for vital resistance handicapped by such an important phenomenon if it were useless in itself. This is supported by the following: Two animals which received sufficiently large doses of germs or toxins to cause their death beyond all doubt, developed very little fever or none at all; whereas other animals who received smaller doses of the infectious disease, so to speak, speedily developed fever and survived, although if the same dose of infection be given and fever be prevented by artificial means, they die as promptly as if a larger dose were used; and, finally, it is interesting to note that, when an animal is immunized by repeated doses of toxic material, it has a febrile movement with each dose until it is completely immune, when the fever ceases, having decreased at each dose, owing to the increasing immunity.

As I have been limited to the space of about twenty minutes, I shall not weary you by adducing a large amount of clinical and other research which supports these views, but will refer you to a paper which I wrote upon the "Role of Fever in the Modification of Disease," which was published in *The Therapeutic Gazette* for February, 1896, in which I think I adduced sufficient evidence to indicate that fever is often a distinctly protective process, designed by nature to aid the animal or man in accomplishing his recovery.

It is interesting to note, too, that all the glands in the body which recent investigation has seemed to prove to have the function of destroying toxins by developing leucocytes, or destroying germs, have their activities materially increased by moderate rises in bodily heat, and that fever in some instances, at least, is distinctly unfavorable to the growth of germs or the manufacture of toxic materials by them. Having mentioned the fact that, in my belief, fever is in a certain number of cases useful, and that where it ought to be reduced the application of cold is our best method for so doing, I now wish to pass on to a brief consideration of the reasons why we should not employ antipyretic drugs to combat febrile movement.

First, let me point out to you that nature has four methods for the protection of the body in disease: First, the elimination of poison by the emunctories; second, the development of antitoxic material by glands and other tissues; third, the production of fever to stimulate and support the system; fourth, the result of increased glandular activity by means of which a large number of leucocytes are set free which speedily attack and destroy the infecting micro-organisms of disease. Antipyretic drugs not only remove the fever and in some instances thereby remove a protective process, but at the same time they depress the nervous centres governing heat processes, increase the work of the emunctories, already loaded down in the efforts to eliminate heat from the body, and also prevent the development of leucocytes, as a result of which the germs are destroyed in the body and perhaps the antitoxins are formed.

It is evident, therefore, that antipyretic drugs, as a rule, combat most, if not all, of the protective measures designed by nature in the presence of the infectious diseases; whereas, on the other hand, the cold bath, while relieving the fever if it is excessive, in no way modifies any of these protective efforts, but, on the other hand, actually increases their activity, for it increases oxidation, and by this means probably aids in the combustion or oxidation of a certain amount of toxic material. It stimulates the glandular system, greatly increasing the quantity of hemoglobin and the red and white cells. The cold bath, therefore, has a physiological action far greater than the withdrawal of heat, which is a minor and side issue.

Nine years ago, when the entire profession were far more interested in the employment of antipyretic drugs than they are to-day, in an essay upon "Fever and Antipyretics" (to which was awarded the Boylston Prize of Harvard University), I said, speaking of antipyrin, "This drug, even though its influence may be most favorable in a given case, still accomplishes nothing in the way of cure. It only governs the heat processes while the disease ploughs its way onward to recovery or death, although it may, by quieting restlessness due to the fever, or the nervous disorder produced by the disease, render the pathway to recovery more easy, but no shorter than if it were not employed. Many physicians have looked, and still look, upon antipyretic treatment as curative in its effects, but nothing can be more distant from the truth."

I reiterated these views, with full confidence in them, in a paper entitled "The Role of Fever in the Modification of Disease," which I have already mentioned, written four years ago, and I still have confidence in the correctness of the views first advanced nine years ago. I have not dwelt upon the minor points in the treatment of fever in this paper, because I have been informed that I am simply to open a discussion, which I hope will be taken part in by most of the members present, and, if opportunity arises after they have discussed the practical side of this matter, I shall, if it seems appropriate, say something further in regard to the treatment of fever when it becomes my duty to close the discussion.

Payment for Abortion Advertisements not Recoverable. It is gratifying to learn (*Med. Press and Circ.*, Apr. 5, 1899) that the City of London Court has decided that a newspaper cannot recover the charge for inserting these pernicious advertisements. "The *Weekly Dispatch* sued an advertising agency for £4 10*s.* for publishing such announcements, and the agency pleaded that as the advertisements were *contra bonos mores* the amount could not be recovered. Mr. Registrar Wild, who heard the case, agreed to this, and refused to give a decree, but also refused to give the agency its costs."

IMMUNITY AND THE USE OF NORMAL NON-IMMUNIZED SERUMS.

A Refutation of Certain Erroneous Views Upon the Subject.

BY JOSEPH McFARLAND, M.D.,

Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia.

It is almost certain that resistance to, and recovery from, disease depends upon varying physiological phenomena, and that the various explanatory theories all contain elements of truth. Without doubt, many bacteria meet their fate in the circulating blood stream; it seems to have been pretty clearly determined that some are destroyed by phagocytes; every one who has done the simplest experiments with the antitoxins is satisfied that they play a most important role, and the most recently advanced theory of Emmerich and Löw takes us back to the original "Retention theory" of Chaveau by supposing that the retained metabolic products of bacterial energy act as enzymes by which the bacteria producing them are dissolved.

In the present status of knowledge, it is the greatest error to dogmatize upon any one method by which the animal organism defends itself against its foes. It should never be forgotten that immunity and susceptibility are relative terms, and that they are often dependent upon accidental conditions. Thus, it is commonly stated that birds are exempt from anthrax, and inoculation under ordinary conditions fails to injure them; but Pasteur showed that, by proper manipulation, as by plunging them into cold baths after inoculation, their resistance could be destroyed. Reptiles and batrachians are also thought to be exempt from tuberculosis and anthrax; yet when, after inoculation, they are kept at a temperature about equal to that of the human body, they may succumb to these diseases. Roger's classic experiment of compelling a rat to turn a revolving wheel until exhausted, then inoculating it with anthrax and producing fatal infection, is almost too well-known to need mention. The influence of food upon vital resistance has also been studied, and it is well known that animals are more resistant upon one kind of food than upon others, and especially unnatural foods. Combinations or symbioses of different kinds of bacteria may be followed by most unusual results, and in my own laboratory Dr. W. Wayne Babcock has successfully infected brown and white rats supposed to be immune from anthrax by the associated introduction of a culture of bacillus prodigiosus. The effects of various "vaccinations" are extremely significant in this connection, and illustrate how changed the animal body must become when, from a dose of prepared vaccine it obtains the power of successfully resisting a fatal infection. This is well illustrated in the case of the vaccines against "Black-leg," the cattle disease of the West. In preparing these vaccines, I use a culture of the black-leg bacillus, which is fatal to guinea-pigs in twenty-four hours. When passed from guinea-pig

to guinea-pig rapidly for a few generations it becomes virulent enough to kill a calf. The muscles of the infected areas in the calf are then cut out, chipped, dried and pulverized. A little of this powder, mixed up with water, is fatal to another calf in eighteen to twenty-four hours. If, however, the dried and pulverized muscle is heated to 90°C. for some hours, it undergoes an attenuation, so that, while it will still fatally infect guinea-pigs, it will not so infect a calf, and when inoculated into a calf produces a very slight reaction, followed by perfect resistance to the most virulent culture it is possible to secure.

The vaccination against small-pox is too well known to need mention. I am therefore led to another very important and very much overlooked fact about immunity, viz., the influence which variations in the bacterium can occasion. Let me illustrate this by a reference to the well-known vaccines against anthrax. If a virulent anthrax bacillus be secured from a cattle epidemic, it will be found to cause a rapidly fatal infection in white mice, guinea-pigs, rabbits, sheep, cattle, hogs, horses, etc. "Pasteur pointed out, and every one who experiments in bacteriology has confirmed his observation, that by causing this virulent bacillus to grow at an unusually high temperature (40° to 42° C.) it can be robbed of its pathogenesis to a greater or less extent, according to the duration of the exposure. It is thus possible to produce bacilli which will kill mice but not guinea-pigs; mice and guinea-pigs but not rabbits; mice, guinea-pigs and rabbits but not sheep; etc. In nature it is very probable that anthrax and other pathogenic bacteria become attenuated in their disease-producing capacity by exposure to sunlight, oxygen, high solar temperature, etc., so that there are varying grades of virulence at different times, and in different places. This is a partial explanation of the well-known phenomenon that the infectious diseases vary in malignancy in different epidemics.

The remarkable part of the anthrax attenuation is, however, observed in the effect following inoculation of the varying grades of bacilli. If, for example, I inoculate a perfectly healthy cow with anthrax bacilli fatal for mice but not for guinea-pigs, no important effect is noted; if I follow this by an inoculation of bacilli fatal for guinea-pigs but not for rabbits, nothing of importance takes place, but after these preliminary injections I find that the cow has become so changed that what would have been a certainly fatal infection in an unprotected cow is now harmless. From these facts it must be very evident that there are accidents of infection which may be beneficial or disastrous according to their kind.

I have thus illustrated (1) that there is no absolute immunity, but that (2) natural and unnatural conditions of temperature, diet, etc., affect it. (3) Symbiosis of bacteria greatly affect it. (4) Modifications of the virulence of the bacteria greatly affect it.

I never think of this subject without recalling the very clear remark of Fraenkel: "A mouse may be immune from a quantity of disease germs

naturally fatal for a mouse, but not necessarily immune from a quantity fatal for an elephant."

With these well-grounded principles of infection before us, I wish next to pass to a most erroneous and pernicious theory that the blood of the *normal animal* is, and must be, the secret of successful therapeusis of the infectious disease. This idea must originate from a hopeless ignorance of the facts which have been clearly demonstrated during the last decade. It presupposes several untrue hypotheses:

(1) That the blood of a naturally immune animal is selected for use.

(2) That this blood acts destructively upon the bacteria of that disease for the treatment of which it is employed.

(3) That the success of the treatment depends upon the destruction of the disease germs.

(4) That the normal serum is identical in properties with the immunized serum.

Taking up these hypotheses in order, I will endeavor to refute them upon purely scientific grounds, leaving my reader to judge for himself what practical application is to be made:

(1) *The blood of a naturally immune animal is selected for use in antitoxic therapy.* I have already partly attacked this error in pointing out the relativity of susceptibility. The chief consideration in the selection of the animal to be used is the amount of serum it can furnish. An experimental research that will take months is poorly repaid if the animal treated furnishes only a thimbleful of blood. When the serum made is to supply thousands with therapeutic doses it must be made by the gallon; therefore the largest available animal—the horse—is selected. That the horse does not suffer from spontaneous diphtheria seems to be pretty well established; but that horses are susceptible to diphtheria is shown by the fact that, in my own experience, at least half a dozen horses have succumbed to doses of 1 c.c. of strong diphtheria toxin—less than $^1/_{500}$ of the usual amount endured by the horse at the end of his immunization. The horse is one of the most susceptible animals to tetanus, dying from the accidental inoculations it receives with great frequency, yet the horse is the animal selected for treatment, and when properly immunized furnishes serum of almost inconceivable antitoxic potency.

The antitoxin formation depends upon an extreme intensification of the natural resistance brought about by purely artificial means. Under no natural conditions, now known, can such a blood condition develop.

(2) *The blood of the naturally immune animal acts destructively upon the bacteria of that disease for the treatment of which it is employed.* Here, again, we have anticipated what is to be said. The horse is highly susceptible to tetanus, the tetanus antitoxin is made by the horse, yet neither the normal horse's blood, nor the immunized horse's serum acts destructively upon tetanus bacilli. The blood of neither the normal nor immunized horse acts destructively upon diphtheria bacilli.

In the classic experiments of Büchner and Nuttall, to which reference has been made by Dr. Parker in a recent article upon this subject,[1] the irreconcilable paradox was observed that anthrax bacilli put into the rabbit's blood in the rabbit's body killed the rabbit of anthrax, while anthrax bacilli put into rabbit's blood out of the rabbit's body were themselves killed. Evidently, in the coagulating of freshly drawn blood some change takes place, and drawn blood is not physiologic blood.

It is also a fact, apparently not known to Dr. Parker, that this germicidal property of the blood serum is of very temporary duration and disappears upon keeping the serum. It is clearly something *in* the blood and *not normal to it* that is responsible for its antitoxic operations.

(3) *The success of antitoxic treatment depends upon the destruction of the disease germs.* In the preceding paragraph, I pointed out that it cannot be experimentally shown that any of the antitoxic serums possess germicidal properties beyond those of normal blood.

The term *antitoxic* serum indicates that the office of the serum is to *combat toxins,* not to kill germs. Antitoxic serums have nothing to do with the disease-producing germs, except that by them the toxin used for immunizing the animal employed is produced. The experiments of Ehrlich and Calmette show that antitoxic serum of great potency can be prepared with ricin, abrin and snake venom. The operation of these is subject to immediate visible proof. For example, when I inject serpent's venom into the ear vein of a rabbit it dies in a few minutes; but if, at the same time or previously, I inject a couple of cubic centimeters of the serum of a highly immunized horse (by the way, horses are so susceptible to rattle-snake venom that I have killed them with 0.01 grm. of dried venom), no effect is produced.

The operation of the antitoxic serum is chiefly, if not solely, through the destruction of the poisonous products of the germs, not of the germs themselves.

(4) *That normal serum is identical with antitoxic serum.* That any one should hold this view simply asserts that he lacks information; for, of the facts I have mentioned, there is none more easily susceptible of demonstration. I observe that those who profess skepticism upon serotherapy (as ordinarily meant) usually entirely forget that in the laboratories where antitoxins are manufactured, and where multitudes of observations are made upon them, thousands of animal tests are made in order to determine that the serums offered for sale possess the very virtue that Dr. Parker concludes they lack. If there is a proof which should convince every prejudiced, as well as unprejudiced mind, it is the test formulated by Behring and Ehrlich. Very briefly stated it is:

(*a*) Find the least certainly fatal dose of toxin for a guinea-pig.

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1 "Concerning Immunity and the Use of Normal Non-Immunized Serums," INTERNATIONAL MEDICAL MAGAZINE, June, 1899.

(*b*) Give the guinea-pig *ten times* this certainly fatal dose of toxin, and varying quantities of the antitoxic serum, until the least quantity that will protect against the poison is found.

(*c*) Express the required dose as a fraction of a cubic centimeter, multiply it by ten, and the result will be the number of units per cubic centimeter.

EXAMPLE.—0.01 c.c. of diphtheria toxin is the least certainly fatal dose for a guinea-pig. Several guinea-pigs are injected with ten times this dose or 0.1 c.c. and $^1/_{1000}$, $^1/_{2000}$, $^1/_{3000}$ and $^1/_{5000}$ c.c. of the antitoxic serum respectively. All die but the first—$^1/_{1000} \times 10 = {}^1/_{100}$—the serum contains 100 units of antitoxin per cubic centimeter. In this same manner are tested all of the antitoxic serums and *the contrast between the normal blood serum, which very rarely contains any protective substance at all, and the best serums which contain* 1,000 *units per c.c. is immense!*

That the antitoxin is something *added to the blood* and not normally present in it, as Dr. Flemming is quoted by Dr. Parker as saying, is proved by the very argument which is adduced to disprove it. It is a substance which readily disappears from the blood of the immunized animal and from the therapeutically treated individual, being eliminated in every excretion. The length of time it is retained varies, and is never longer than a few months, usually probably about four or six weeks. I perfectly agree with Dr. Parker that "There is nothing to disprove that this so-called antitoxin serum is not either a concentrated solution of normal resisting fluid or an irritant which acts by stimulating the normal glandular system."

I do not attempt to say what the antitoxins are. I do not know, and no one at present claims to understand them. There are various theories: (1) That the antitoxin is the toxin in a changed condition, that it undergoes some kind of an oxidation in the system similar to that observed by Charrin and D'Arsonval and Bolton and Pease in the process of electrolysis by which they changed toxin into antitoxin in the test-tube; (2) that it is a vital product of cellular energy brought about by the stimulation afforded by the toxin; (3) that it is a ferment exciting a great antitoxin production in the body; (4) that it is a quantity of bacteriolytic enzyme which has collected in the blood of the horse in the process of immunization.

"Normal serum is antagonistic to all toxins" (!) only in that it dilutes them, and hastens their elimination. That this declaration is absurdly untrue, is sufficiently illustrated by the fact that thousands of people are dying every day from the presence in their blood of the toxins of the specific infectious diseases, in spite of their ten to twenty pounds of normal serum.

Five Successful Pylorectomies. At a recent meeting of the Clinical Society, London, Morison showed 5 cases upon which he had performed pylorectomy for malignant disease. The patients were free from signs of recurrence or metastasis, although more than 18 months had elapsed since the operation in any case.

LECTURE.

A CASE OF ARTHRITIS DEFORMANS OF THE HIP JOINT.[1]

BY CHARLES GREENE CUMSTON, M.D.,

Assistant Professor of Surgical Pathology in the Faculty of Medicine in Tufts College, Boston; Honorary Member of the Surgical Society of Belgium; Fellow of the American Association of Obstetricians and Gynecologists; Corresponding Member of the Obstetrical and Gynecological Society of Paris; of the Pathological Society of Brussels; of the Association of Genito-Urinary Surgeons of France, etc.

THE patient that I wish to show at our clinic to-day is sixty-one years of age, and by occupation a cook. As far as the family history goes, we find that the patient's mother and father died late in life, probably from old age, while one brother died of heart disease. There is one brother and two sisters alive, and the patient tells us that they are apparently healthy in every respect. The patient also says that she has never been seriously ill, and that the present complaint, for which she has consulted us, has now been present for over three years, but it was only noticed at first when she began to have trouble in walking, on account of a slight shortening of the left leg which appeared. The disease then became more pronounced, and little by little the patient was obliged to limp, on account of the pain present in the hip joint.

Examination of the patient shows that she is a well-developed and healthy-looking person for her years. Examination of the heart and lungs reveals nothing abnormal, and the urine is free from pathological elements. The left leg is about three centimeters shorter than the right leg, and the point of the greater trochanter is found above the Roser-Nelaton line. I have never been able to find any pathologic change in the anterior or external surface of the femoral joint; but when the patient was examined under ether, we found that there was an almost entire absence of inward rotation, very considerable decrease in abduction, and a considerable restriction of flexion, while outward rotation, as well as adduction, was apparently quite free. These phenomena of imperfect movements led us to hesitate between a diagnosis of coxa vara, an impacted fracture of the neck of the femur, and arthritis deformans. But the possibility of a tubercular coxitis being present is only small if we consider that there is absence of any of the anomalies in the position of the limb, such as are characteristic and always present in the case of coxitis as well as the free and unrestricted outward rotation. An impacted fracture of the neck of the femur can be immediately excluded, because the patient has not sustained any traumatism, and, still more, the patient has never had to take to her bed and has always been able to walk about, the present complaint having gradually developed, and without any known cause. Still, it must be admitted that the shortening of the leg and the restriction in the movement

[1] A clinical lecture delivered on April 20, 1899.

of inward rotation are symptoms that would indicate a fracture of the neck of the femur.

As to the treatment in this case, a dorsal pasteboard splint was applied, and afterward the limb was done up in a plaster of Paris dressing and then suspension and counter extension were employed. At the end of four weeks, the dressings were removed and passive movements of the limb were begun, and at the end of another week the patient was allowed to leave her bed and every day was given a hot bath.

Now, in considering this case, we must bear in mind that the disease has existed for three years and no traumatism is mentioned by the patient, her attention only being called to her affection on account of the pain in the femoral joint when she walked, and also because limping became more pronounced. On the other hand, examination of the patient shows that there is a shortening of the affected limb, an elevated position of the trochanter, a decrease in abduction, normal adduction, complete restriction of inward rotation, with an outward rotation nearly perfect.

The diagnosis of this case must, therefore, be differentiated from that of chronic hydrarthrosis, chronic arthritis, tubercular coxitis, coxa vara and arthritis deformans.

In the hydrarthrosis there follows an acute serous synovitis, or its course and commencement may be gradual. The principal causes of hydrarthrosis are various forms of traumatism, such as contusions and sprains, or it may follow the acute, infectious diseases, such as scarlet fever; or, on the other hand, it may follow gonorrheal infection of the joint. Now, in looking over the history of the case before you, there is nothing that would induce us to believe that the present affection was hydrarthrosis. The symptoms of hydrarthrosis are, firstly, a perfectly distinct fluctuation in the diseased joint, and pains with both active and passive movements; there is also a restriction of some of the movements of rotation.

If we now consider the chronic diseases of the femoral joint, we must first take up chronic arthritis. The course of this affection is either that it follows an acute rheumatism, or it may start from the beginning in a latent way and develop very gradually, but as a rule this disease does not limit itself to a single joint, and usually it will attack several. The patient will complain of dragging, burning pains, and will tell you that the movements are restricted more especially in the morning, and more painful than later on in the day. Suppuration, ulceration and necrosis of the bone is never met with, and a collection of synovial fluid is never present to any great extent. In the more serious cases, a more or less complete ankylosis will sooner or later occur.

When the joints of these patients are moved, a grating sound will be heard, which is due to the newly-formed connective tissue and to the roughening of the cartilage in the joint, and later on in the disease muscular atrophy will be found. I consequently think that we can exclude chronic arthritis in the present case, from the fact that only a single

joint is the site of any trouble, also from the fact that we have a shortening of the limb. We have before us some other disease of the hip joint.

Tubercular coxitis, which is also a chronic disease of the hip joint, presents three stages, the symptoms of which show themselves in a very similar manner to those in the case before us: aside from the primary stage of coxitis, where we have limping and pains in the femoral joint, we have the two other stages, in which fluctuation, abduction and outward rotation are apparent, or actual lengthening of the leg is present; or we may have adduction, inward rotation, flexion of the femoral joint and an apparent or real shortening of the limb. During the course of tubercular coxitis, the region of the hip joint will be found tumefied; owing to the inactivity of the movements of the joint, the muscles of the thigh and leg will become more and more atrophied. The pains in the joint may reach such a degree that standing up or walking may become impossible, and these unfortunate patients will be obliged to take to their beds. After a certain number of months or years, a spontaneous cure of the process in the joint may take place, and in some very rare instances recovery has been known to occur during the primary stage of the disease.

Now, although the affection present in our patient of this morning has developed in a chronic way, in order to exclude tubercular disease of the hip joint we have only to consider for a minute the history of our case. She has told us that she was subject to pains in the hip joint, especially in walking, and that a shortening of the limb, soon accompanied by limping, appeared. The shortening of the member was, however, not accompanied by any of the anomalies in the position of the limb so characteristic of tubercular coxitis.

A careful examination of the chest showed that there was no disease of the lungs, and consequently the possibility of the present affection being tubercular is most improbable, and we may exclude it.

Let us now consider another chronic affection of the hip joint, viz., coxa vara. The typical picture of a coxa vara is in many ways similar to our case of this morning. The pain in the affected joint, the gradually developing limp, the appearance of the disease without any cause, are present in both this patient and in coxa vara, but in most cases of the latter affection it is young people, from twelve to twenty years of age, that are most frequently the subjects attacked by it. When the disease has reached its height, the following symptoms will always be present, viz., there is adduction and inward rotation.

Hofmeister, who has probably collected the greatest number of cases of any one man, divided the cases of coxa vara as follows: Firstly, the patient presents a simple high position of the trochanter, consequently a shortening of the leg is present, limited adduction with restricted abduction; while, on the other hand, we find a perfectly free flexion and extension, as well as a perfectly free rotation; this group forms the smallest number of cases. In the second group we have a high position of the trochanter and

an outward rotation; flexion is free, at least when there is considerable outward rotation and extension; adduction is free, and so is outward rotation; but, on the other hand, we have a limited abduction, as well as inward rotation. In the case I have shown you, we find a diminution of the abduction, complete restriction of inward rotation and normal adduction; we also have a shortening of the limb, which, as I have shown you, in our case is due to a deformity of the condyle as well as to its slightly downward direction, which is abnormal; and, above all, the age of our patient certainly speaks against coxa vara, inasmuch as coxa vara usually begins at a time when there are rachitic changes in the bones, and in our case the disease has only been complained of in recent years. And, still more, in our case of to-day there is no abnormal backward growth of the neck of the femur, and also we have not the great outward rotation which in most cases is almost always present in coxa vara, while the two prominent symptoms of arthritis deformans, viz., a restriction of inward rotation and movements of abduction, are marked.

Now, taking all the symptoms into consideration, we may safely exclude coxa vara in our patient and, after this somewhat lengthy consideration of the differential diagnosis of the diseases of the hip joint already enumerated, as well as their symptoms, and, after having considered the reasons which have led us to presume that our patient is affected with one of the diseases already enumerated, we can, with certainty, make a diagnosis of arthritis deformans by exclusion.

We will now consider the pathological anatomy of arthritis deformans in some detail. From its name, you may all readily imagine what might be the characteristic changes occurring in the joint in arthritis deformans. In the first place, a highly chronic inflammatory process of the joint takes place, from which the shape and the entire anatomical structure of the joint suffers. The joint does not undergo a destruction and then obliteration, as is the rule in most diseases of the joint having a fungous character, and even if the disease reaches its highest point of development, the joint will retain a certain part of its mobility; but it is gradually deformed and all its parts undergo a pathologic change.

The disease occurs most usually in old or elderly people, and in most cases several joints are attacked, either simultaneously or one after the other. At no time during the affection is there any elevation of the temperature, and suppuration or necrosis of the bone never takes place, even if the affection continues for many years, and is on the increase all the time. A cure is absolutely impossible, and all that surgery can accomplish is to arrest the process to a certain extent.

Arthritis deformans is essentially a disease of old age, which begins, as a rule, with some actual cause, such as a traumatism, an infection, and more rarely spontaneously, and which, from a pathologic point of view, gives rise to first a process of degeneration in the cartilage of the bone, and, secondly, to hyperplasia of the bone. The pathologic changes of cartilage

and the capsule produce a gradual deformity in the joint, and cause disturbances in the movement of the affected articulation. If we examine a joint that had been the seat of an arthritis deformans for some time, we will find all the parts making up the articulation considerably altered.

First, regarding the changes in the bones, we will find that the condyle is flattened, so that its shape is very similar to a mushroom or a derby hat. At the same time, the position of the condyle in its relation to the diaphysis is frequently changed. The condyle looks as if it had been fastened to the bone in a bent or irregular manner, sometimes in a slanting direction or at other times laterally. The changes that take place in the femoral joint are very interesting and odd, but in spite of these queer deformities of the ends of the femur there remains, as a rule, a certain amount of regularity of the opposed articular surfaces, so that the functions of the joint, although rendered more difficult and impaired, are not entirely done away with. Pathologic changes that are just as important as those arising in the bone are to be observed in an articular cartilage. Histological processes that do occur are of the most varying types; they are partly of an active and partly of a passive character. Exuberant hyperplastic growth and ossification take place, while, on the other hand, fatty atrophy and a wearing away of the tissue will be present. The usual result is, however, that the cartilage to a more or less greater extent disappears, and at this place, which will gradually increase in circumference, the underlying bone is denuded, and in some instances almost completely bared. The intra-articular ligaments, such as the ligamentum teres and the ligamenta cruciata, as well as the intra-articular cartilage, disappear in the diseased joint on account of a fatty metamorphosis, and in some cases of long duration no trace of the ligaments can be discovered.

The joint capsules are thickened, and undergo a fibrous tissue change which roughens them on their surface, and the epithelial covering is lost. At the beginning of the affection the synovia is often increased in amount, but later on in the affection it is found in only a very limited degree. The villi of the joint are enlarged, both in length and breadth, and very numerous excrescences spring off from them and they are present in far greater numbers than in normal joints.

Arthritis deformans may attack any joint in the body, the small as well as the large. As to the frequency with which the joints are attacked, I would say that the knee is the most frequent site of the disease, and after this comes the hip, elbow, shoulder, fingers, the small joints in the foot, and, last of all, the vertebral column. We should also make a distinction between the poly-articular and the mono-articular forms of the affection.

The most frequent form of arthritis deformans is the poly-articular, and when this takes place almost all the joints of the body may be affected simultaneously or one after the other, or only two symmetrical joints may be the seat of the disease. The mono-articular form is in most cases due to traumatism; the most common being intra-articular fractures, or

fractures that penetrate into the articulation, and also contusions and sprains of the joint, especially if there has been a laceration or rupture of the important intra-articular ligaments.

The course of arthritis deformans is always a very chronic one, and the disease may last for many years, thirty or forty not being at all rare. In some cases, the disease may become arrested in its progress, but a cure will never occur when once the affection is well under way. Just as the deformed condyles which are deprived of their cartilage, or just as the thickened condyles can possibly return to their natural condition, an obliteration of the joint by a solid cicatricial tissue is also possible. To make a diagnosis of the affection is only possible when the disease is advanced to a certain extent, because before this years may have passed by before the symptoms become those of a chronic arthritic, without suppuration, fever, or any detriment to the general health of the patient.

As the joint symptoms of this disease are essentially the same, I will only mention those which occur in arthritis deformans of the femoral joint. In the beginning of the disease the patient will tell you that he has pain, and that there is a restriction in the movements of the joint, which is more marked in the morning just after the patient has gotten up. Gradually a restriction of the extreme movements set in, and very frequently adduction and abduction are the most impeded, a symptom which may be traced back to the chronic inflammation of the joint, as well as to the retrogressive and progressive changes taking place in the condyle. Very soon after this, pains will occur while the patient is walking, and by moving the joint with one hand placed over it a distinct crackling will be felt. As the disease progresses every motion of the limb becomes more difficult, and flexion is also hindered, and at this point we may almost always find a change in the shape of the joint, which is felt as a hard tumefaction in the region of the neck of the femur, and also a change in the length of the bone, owing to the anatomical lesions, more especially an atrophy of the head of the bone. Tumefaction is usually due to an exuberant growth of the cartilage. Now, if the condyle begins to undergo atrophy, and if, therefore, the newly formed and deformed condyle recedes more and more on the neck of the femur toward the small trochanter, we naturally will get a shortening of the limb. The protrusion of the trochanter over the edge of the ischium is produced by a widening of the glenoid cavity outward and backward. The shortening of the limb may be as much as two or three centimeters, and the foot will usually be found in a slight outward rotation. And last of all, when the disease has reached its utmost limit, the joint becomes entirely fixed and then the pathologic process reaches its end.

If we now briefly sum up the characteristics of arthritis deformans of the femoral joint and compare them with the symptoms such as we find in our patient, we find that the pathological aspect of the case entirely fits in with them. The slow development of the disease, with pains only in the limb affected; then limping, which was soon followed by a gradual shorten-

ing of the extremity; of the limited restriction of inward rotation and abduction; the elevated position of the trochanter, the age of the patient—all this, gentlemen, would suggest that we have before us a typical case of arthritis deformans of the femoral joint, and that, by examination and consideration of the case, any other chronic affection of the joint may be excluded without a shade of doubt.

As to the operative treatment of arthritis deformans, I would say Volkmann was the first who advocated surgical measures for the disease, and he proposed to operate in cases where the shoulder and elbow joints were the seat of the affection, but to abstain from surgical operation in cases of the knee and hip joint on account of the general dangers which are connected with resection of these joints. Other contributions on the question of operative treatment were given by Zesar, Cornils and Mueller. In Mueller's operations he was able to abolish the pains with which the patient was affected, and no recurrence took place. The improvement in the functions of the joints may be considered on the whole as very good.

Mueller has reported three cases of resection of the shoulder joints of arthritis deformans, and, generally speaking, it may be said that operation is quite justifiable, even if an essential improvement in the function of the joint is but small, as by operation the patient is very sure to get much relief.

The non-operative treatment of arthritis deformans, which will only be effectual when applied during the early stages of the disease, consists in hydropathic cures, especially at the sulphur and alkaline springs. The patients should be especially instructed not to stop movements in the hip joints if they do not wish to have an increase in the stiffness of the articulation. If the pains which are so troublesome in the advanced stage of the affection have disappeared by an immobilization of the hip joint, the treatment should be followed up by massage and Swedish movements. Climate is also of considerable value, and patients derive much benefit from a season in the South. You should never neglect the exhibition of tonics and general tonic measures.

In the case which I have shown you to-day, improvement in the pains and in the general condition of the joint have taken place after the treatment above described, but the patient will be kept under observation, in order that we may treat any further symptoms which may arise.

Strictly speaking, in considering the diagnosis of this case, coxa vara and arthritis deformans were really the only two diseases which should have received our strict consideration, but I have mentioned the other chronic diseases of the hip joint in order to be more complete. The absence in the history of two important symptoms, viz., the want of any abnormal curve in the neck of the femur, and the considerable outward rotation, which generally are present in cases of coxa vara, were of decided importance when making the differential diagnosis in the present case.

871 Beacon Street.

TALKS TO GENERAL PRACTITIONERS.

THE TREATMENT OF ECZEMA.

BY JAY F. SCHAMBERG, A.B., M.D.,
Associate in Diseases of the Skin, Philadelphia Polyclinic.

It has been truly said that he who knows how to correctly diagnose eczema knows the subject of dermatology. Aside from the fact that this disease constitutes one-third of all skin affections, it is of importance because of the protean character of its manifestations.

And equally true is the remark that he who knows how to correctly treat eczema knows the treatment of all skin diseases.

Eczema is not a disease with a single specific cause: It is, when of constitutional origin, the result of chemical and vital changes in the blood, which are in turn dependent upon disturbances and diseases of the various organs and tissues. Among the causes of eczema, we find: Disorders of the alimentary canal (including constipation, dyspepsia, and auto-intoxications), functional and organic nerve affections, rheumatism, the uric-acid diathesis, Bright's disease, diabetes, diseases of the uterus and appendages, scrofula, dentition, etc. When of local origin, eczema is the result of the continued action of an irritant, either chemical, thermal, or mechanical.

You will not then be surprised to hear that there are no specifics in the treatment of eczema. Internal treatment must be based upon broad general principles. The first therapeutic endeavor should be directed toward the removal of the cause. This, however, is not always easy to ascertain.

In all extensive eczemas the diet should receive careful attention. Such articles as salted meats, pork, shell-fish, sugars, pastries, confections, pickles, sauces, condiments, cheese, and excess of starchy foods should be assiduously avoided. Tea and coffee should be reduced to a minimum, and alcoholic beverages entirely prohibited.

It is a matter of the greatest importance to keep the bowels in proper order. In acute eczema, it is desirable to inaugurate the treatment with free catharsis. This is best done by means of the salines, either alone or preceded by calomel.

A very useful preparation in the treatment of eczema, complicated by constipation and anemia, is the acid mixture of iron first used by Mr. Startin, of London. It combines the advantages of a laxative and tonic. It consists of

℞ Ferri sulphatis, ... gr. xvi.
Magnesii sulphatis, ... ʒi.
Acidi sulphurici dil., ... fʒi.
Aquae menthae piperitae, ... q.s. ad.. ..... fʒiv.
M. S. fʒss. in half a tumbler of water before breakfast.

The saline waters, of which "Hunjadi Janos" is the best, are both efficient and convenient of administration. In infantile eczema, fractional doses of calomel are often followed by rapid improvement, even in cases in which constipation does not exist. Stomachic tonics and digestives are required in many cases of eczema. In patients suffering from atonic dyspepsia and constipation, the following prescription will be found of value:

℞ Tr. nucis vomicae, ... f℥ss.
Acidi hydrochlorici dil., ... f℥ss.
Ext. cascarae sagradae fld., ... f℥i.
Tr. cardamomi comp., ... q.s. ad. ..... f℥iii.
M. S. f℥i. in water after meals.

Diuretics are of value in acute and subacute eczema. The acetate, citrate and bicarbonate of potassium, in ten to twenty grain doses, may be given one half hour before meals, or the alkaline mineral waters may be employed.

Arsenic has but a limited field of usefulness in the treatment of eczema. It is of most value in the chronic papular and squamous varieties, and in the recurrent vesicular eczemas involving the fingers. It is contraindicated in acute eczema and whenever the degree of inflammation is high. In strumous individuals with glandular enlargements, cod-liver oil is a remedy of the greatest efficacy.

The local treatment of eczema is perhaps the more important in the majority of cases. The selection of remedies and their strengths must be governed by the grade of inflammatory reaction present. In an acute eczema the remedies cannot be too soothing. Too strong an application works immediate injury; too weak a remedy can do no worse than fail to do good.

Water is an irritant in all acute and subacute eczemas, and is to be used as infrequently as is compatible with cleanliness. It may be made less irritating by the addition of starch, bran or borax. In indolent chronic eczemas, soap and water are of therapeutic value. They are useful also at times to remove crusts in the acute varieties. It is, however, better to remove crusts by the process of softening. Pieces of flannel soaked in linseed or olive oil kept in contact with crusts for a few hours will soften and loosen them. If they are very adherent a luke-warm starch or flaxseed poultice may be applied. Pastes and salves should be removed from the skin by means of oily and unguentous substances. Petrolatum or olive oil, and not soap and water, should be used for this purpose.

At the onset of a vesicular eczema, dusting powders may be used with advantage. Many substances have been employed for this purpose—wheat starch, corn starch, rice flour, bismuth subnitrate, talcum, magnesium carbonate, zinc oxid, boric acid, kaolin, etc., etc. These may be used in varying combinations. The application of a dusting powder has a distinctly cooling and sedative influence upon an acutely inflamed skin.

Where moisture is copiously present, lotions will be found to be eminently useful. Under such conditions they are borne infinitely better than ointments. The simplest lotion is a saturated solution of boracic acid. This has been found to be just as soothing to the skin as it is to the mucous membranes. Sopped on every hour in acute eczema, it acts admirably in reducing inflammation. The calamin lotion is also a most efficacious application. It consists of

Pulv. calaminae, ...		
Pulv. zinci oxidi, ...	aa	ʒii.
Glycerini, ...		fʒi.
Aquae calcis, ... q.s. ad.		fʒvi.

Powders held in suspension in a liquid have an admirable drying effect upon moist patches. After evaporation of the fluid takes place, the suspended powder dries upon the skin, and so the effect of a dusting powder is also obtained. When there is much itching, resorcin or carbolic acid may be added to the wash in the strength of five to ten minims to the ounce. With many dermatologists a favorite treatment for acute eczema is the use of black wash, either pure or diluted one half with lime-water, followed by the application of ordinary oxid of zinc ointment.

Soothing ointments are frequently employed in acute eczema. A good plan is to apply a lotion during the day, and a salve at night. Care should be taken to make the ointment weak and unirritating. One may use the ointment bases alone, such as petrolatum, cold cream, lanolin, oxid of zinc ointment, adeps, and such pastes as that devised by Lassar, which consists of one part each of oxid of zinc and starch to two parts of petrolatum; or some medicament, such as boracic acid or salicylic acid, may be incorporated in them.

A very old and efficient remedy in acute eczema is the diachylon ointment of Hebra. It must be freshly prepared, and should be applied upon strips of soft linen.

Subacute Eczema.—When the stage of acute inflammation has subsided, more stimulating applications may be used. Itching is a symptom which must be combatted. The most valuable antipruritics are carbolic acid, tar, menthol, and resorcin. Carbolic acid is the morphia of the skin. It is ordinarily applied in the strength of ten grains to the ounce, but this may be considerably increased. Other remedies frequently employed in subacute eczema are salicylic acid and calomel.

In chronic eczema strong applications are required to promote an absorption of the infiltrate. Here the tar preparations find their greatest field of usefulness. They are never to be used in acute eczema, and only with caution in the subacute forms. Tar is of great value in relieving the itching of obstinate papular eczemas. It may be incorporated in ointments, lotions or paints. The unguentum pix liquida, or the oil of cade, may be used with oxid of zinc ointment in the strength of one or two

drams to the ounce. It may also be incorporated in collodion in the same strength, and painted on the part.

I wish to call your attention to a very valuable preparation, which is known as liquor carbonis detergens. It is composed of mineral or coal tar and tincture of soap bark. In the strength of about two drams to four ounces of water it makes an extremely useful lotion in subacute eczemas.

In pustular eczemas the preparations of mercury, particularly the ammoniated mercury in the strength of ten to forty grains to the ounce, give admirable results.

For a squamous or horny eczema of the palms, nothing equals a ten to twenty-five per cent. plaster of salicylic acid.

In eczemas involving large areas of the body surface, baths are most grateful and beneficial. The usual baths employed are those containing starch, bran, marsh-mallow, gelatine, etc., or the alkaline bath made by adding a quarter of a pound of carbonate of soda or borax to the tub of water.

Whilst much depends upon the selection of the proper remedies and their proper strength, success will not be attained unless due attention is paid to the minutiae of treatment. The patient must be instructed how to apply remedies and how to remove them, and how to cleanse the skin and how not to cleanse it.

As in so many other things, attention to detail is the key-note of success.

THE ASEPSIS AND ANTISEPSIS OF MINOR OPERATIONS.

BY CHARLES L. LEONARD, M.D.,

Instructor in Clinical Surgery, University of Pennsylvania, and Skiagrapher to the University Hospital.

Although the vast majority of practitioners do not perform major operations, asepsis and antisepsis have as real a value in their work as in any other field. In fact, you will find that strict asepsis and antisepsis in minor operations, if carried out with proper care, would save in the aggregate more suffering and prevent more loss of valuable time to those who can least afford it, in minor surgical cases, than they do in major operations; although the effect on the mortality from operations would not be as marked.

The application of these principles in your minor surgery will be gratifying both to you and to your patients. Many cases of septic infection will be prevented; many badly injured fingers and toes, that would otherwise have been sacrificed, will be saved.

The different ways of producing asepsis and antisepsis were discussed in a previous talk. It was shown that antisepsis must always be the partner

of asepsis, and that in the perfect combination of the two is found the best method. In minor surgery, as in major surgery, the attention to aseptic details in operating is the key-note of success.

Antiseptics must be employed in all operations to cleanse the hands of the operator and his assistants and to render the field of operation as nearly sterile as tissues can be made. This is generally secured by washing the hands thoroughly in two changes of water, with a sterile scrub-brush and soap. The tincture of green soap is very useful for this purpose. The nails must be carefully cleaned, both beneath and in the spaces about them. The hands should then be washed in alcohol of good quality or refined benzine, to remove all fatty matter and permit the action of the antiseptic solutions that follow. These solutions are corrosive sublimate, the bichlorid of mercury in the strength of 1-1,000, or 1-40 carbolic acid. The hands should then be washed in sterile normal salt solution, and, if the strictest asepsis is to be maintained, they should be dried with a sterile towel and encased in sterilized rubber gloves. Solutions of this strength are seldom used for other purposes than for cleansing the skin, and if ever employed in abscess cavities or wounds they should be thoroughly washed out with sterile water or weaker solutions. The skin of the patient in the field of operation is prepared in a similar manner, a previous shaving having removed all hair. Where there is any probability of an infection of the hands having taken place, from a previous operation upon a septic patient, the use of a saturated solution of permanganate of potassium, followed by a saturated solution of oxalic acid, is of great value, as this agent apparently possesses a marked germicidal action through its oxidizing power. You will find these solutions of great value in cleansing old and badly infected wounds and ulcers, where a mass of unhealthy granulations and sloughing devitalized tissue makes a field for the development and propagation of bacteria and prevents the action upon the deeper tissues of the active antiseptic agents you employ. This is also one of the most valuable properties of the peroxid of hydrogen, although due care must be employed in its use and its injection into deep-seated abscess cavities avoided, unless a sufficient outlet is provided for the gases evolved. In such cases it must also be employed well diluted.

The field of operation after it has been carefully prepared is surrounded by sterilized towels, or in case of abscesses and infected wounds, by towels wrung out of a 1-2,000 bichlorid solution. The instruments, after being boiled, are placed in sterile water or in 1-100 carbolic solution. Silk sutures can be rendered aseptic by boiling, or, a better plan is to render them antiseptic by boiling them for ten minutes in a 1-2,000 bichlorid solution. This apparently does not interfere with their strength, yet it renders them antiseptic, thus preventing subsequent infection in handling and the formation of annoying stitch abscesses.

Sponges are readily made of gauze (cheese-cloth) or of absorbent cotton,

and may be either dry and sterile, in sterile water, or antiseptic, by being wrung out of a 1-2,000 bichlorid solution.

The difference in the use of asepsis and antisepsis during the operation depends entirely on whether the wound is previously infected or not. If suppuration is present, your object should be two-fold—to remove the source of infection and the collection of pus already present, removing so far as is possible, with curette and antiseptics, the infecting organisms and preventing by occlusive dressings the further infection from without, thus promoting rapid healing by granulation. Where the field of operation is free from infection, on the other hand, your objects should be, to prevent infection by aseptic technic in operating, to prevent subsequent infection by occlusive aseptic dressings, and to promote primary union by securing a dry wound and by refraining from the use of irritating antiseptic solutions, powders and dressings.

Numerous experimenters and operators have proved that the majority of antiseptic solutions, and, in fact, all that possess marked germicidal power, produce an irritation of the tissues that is detrimental to their vitality and retards the healing process. When you are obliged to use antiseptic solutions in infected wounds, it is well, in all cases in which it can be safely done, to thoroughly irrigate the wound with sterile water, washing away the irritating antiseptics, drying the wound with sterile sponges or gauze pads, and closing it without the employment of irritating antiseptic powders. In some cases such treatment, with provision for drainage, will be sufficient to secure not primary but a rapid secondary union. Such treatment is very useful in cases where the infection is not actively in evidence but is only suspected. Where, however, it is possible to obtain a dry aseptic wound, drainage should be avoided. Aseptic treatment will secure the best results wherever it can be employed; but where marked infection is present vigorous antisepsis is indicated. The subsequent dressings must be carried out with as rigorous antisepsis and asepsis as the original operation. The wound must be guarded from infection at all times.

The aseptic dressing consists of dry sterile gauze, fluffed to facilitate absorption, then folded sterile gauze, and the whole carefully covered by sterile absorbent cotton. This layer of cotton is of great importance, and should extend beyond the gauze dressing on all sides. Bacteria cannot pass through dry cotton; it therefore acts as a filter and prevents air impregnated with bacteria from reaching the wound during the active movements of the patient. This precaution is frequently overlooked by experienced operators, but should be carefully attended to in all cases. Whenever it is possible to be absolutely certain of the asepsis and dryness of a wound, sealing by a celloidin dressing, through which the wound can be readily observed, is probably the best and most efficient dressing that can be employed. Through it any inflammatory signs can be noted, while the careful observation of the temperature will determine whether the dressing has to be removed or not.

Antiseptic dressings are employed to aid in sterilizing infected wounds after operation and to render sterile the discharges that flow from such wounds. They are very efficient after operations where subsequent sloughing and discharge are expected, as after the opening of boils or felons. You will find that their employment, even in such minor cases, will render valuable service. Bichlorid of mercury in 1-2,000 or 1-4,000 solutions is the agent most frequently employed. Carbolic acid should never be used, as it is liable to produce gangrene, especially in the extremities. Gauze wrung out of a 1-2,000 bichlorid solution, and applied with dry gauze over it, forms a dry antiseptic dressing as the moisture evaporates. Where a more vigorous action is desired in an infected wound, the gauze is applied moist and covered with oiled silk, gutta-percha tissue or waxed paper. This wet bichlorid dressing retains its moisture and has a more penetrating and lasting antiseptic action. Where heat and moisture are essential to the breaking down and discharge of infected tissues these dressings are invaluable, or where a vigorous and continued antiseptic action is essential to the sterilization of a wound. On some skins these dressings will produce irritation. Sterile boric acid ointment will protect the skin from such irritation, or the antiseptic solution may be diluted. This should always be done in cases of infants and children. Antiseptic powders should be avoided whereever possible. Boric acid, though weak in its antiseptic power, is a good drying powder and has the valuable property of being non-irritating. Iodoform is, on the other hand, irritating and prevents primary union. Its antiseptic action is due to the liberation of the iodine it contains, and when it acts antiseptically it must have the irritant properties of iodine. Its efficiency cannot be denied, especially in cases of tubercular infection; but its employment should be avoided where asepsis will suffice and where primary union in a dry, unirritated wound is hoped for.

Sterile gauze is the best packing for wounds; it provides for the absorption of secretions and deprives the bacteria of the moisture they require for growth and activity.

The American Electro-Therapeutic Association will hold its 9th annual meeting at Washington, D. C., September 19, 20, 21, 1899. The president is Dr. F. B. Bishop; the committee of arrangements: Drs. D. Percy Hickling, chairman; Jos. Taber Johnson, G. Lloyd Magruder, Z. T. Sowers, Robert Reyburn, G. Betton Massey, Chas. R. Luce, Elmer Sothoron, Llewellyn Eliot, Clifton Mayfield. The committee not only promises many interesting scientific features but also a very pleasant social programme, including a reception by the President of the United States, an excursion to Mt. Vernon, Arlington and Alexandria—a buffet lunch to be served at Alexandria—an evening visit to the Congressional Library, to be viewed under electrical illumination, etc.

THE ETIOLOGY AND DIAGNOSIS OF CHRONIC STHENIC GASTRITIS. (ACID GASTRIC CATARRH.)

BY BOARDMAN REED, M.D.,
Philadelphia, Pa.

It may be considered as now established that there are at least two widely different types of chronic gastritis—the sthenic and the asthenic—those with an excessive secretion of HCl, and of the digestive ferments, and those with a deficiency or absence of the same. Further subdivisions have been made; and, in particular, there have been described an interstitial gastritis and an atrophic glandular gastritis; but the former may complicate any of the other varieties, and the latter is present in the terminal stage of most at least of the asthenic forms and exceptionally may occur at the end of the sthenic ones.

Chronic sthenic gastritis—acid gastric catarrh—was formerly always classified among the gastric neuroses, and still is by some authors, the accompanying inflammatory condition having been overlooked; but there is nothing neurosal about it except, possibly, its origin in a certain proportion of cases, and its disastrous effects upon the nervous system. Once established, it is one of the most constant, persistent, and even stubborn of gastric diseases. It affects chiefly persons of a nervous temperament, and the original nervousness of its victims is aggravated by the damaging effect which the excessively acid chyme has upon intestinal digestion, the gastric and intestinal mucous membrane and the peristalsis.

As to its etiology, the neuropathic constitution seems to be a decidedly predisposing factor, and since it occurs far more frequently among brain-workers than among those who work mainly with their muscles, there is probably ground for the opinion of Mathieu, and other French authors, that intellectual overwork may be one cause. Mathieu advises sexual rest in the treatment of the affection, and would therefore doubtless include excesses in venery among the predisposing causes. However this may be, it is suggestive that of the large number of cases of acid gastric catarrh that have been studied by me, the great majority have been in the persons of respectable widows, maiden ladies, continent widowers and bachelors, and married men of advanced years, in whom sexual desire has presumably outlived potency. In the minority there was usually a history of excessive mental or nervous strain, with irregular and rapid eating. It is probable, too, that the prevalent use of very highly seasoned foods and stimulating drinks, especially the sharper spices and condiments, as well as strong coffee and tea, by persons in whom the gastric secretion is always abundant enough without such irritants and in whom the nervous supply of the glandular apparatus, as well as the nervous system generally, is excessively

sensitive and hyper-excitable, must conduce to the over-action of the gastric glands and finally to proliferation of the glands themselves.

The symptoms alone will not, as a rule, enable you to make the diagnosis of sthenic gastritis. An analysis of the stomach contents after a test meal is always necessary before a positive decision can be reached. In the earlier stages, and even in fully developed cases, there are often no symptoms except those referred to the intestines or to the nervous system. Prominent among the latter is a disturbance of sleep which may amount to obstinate insomnia or, as is more common, only to an uneasy, restless sleep, with the habit of awakening entirely at a very early hour of the morning. A majority of patients who, while blessed with a sharp appetite and a craving for meats especially, are irritable and excitable and unable to sleep after four or five o'clock A.M., will be found to be suffering from hyperchlorhydria, with or without gastritis of the proliferative type. When the sleep is promptly helped by a teaspoonful dose of bicarbonate of soda taken at bedtime, it may be set down as reasonably certain that the cause of the trouble is hyperacidity of some kind, and very generally it is the form under consideration.

There is nearly always a high degree of nervous erethism, with at first much mental activity; but later there may be depression; also intestinal flatulence and often gastric flatus as well, and either constipation or diarrhea—generally at first constipation and later diarrhea alternating with constipation, though exceptionally the bowels may continue to act normally, even in an advanced stage of the disease. The appetite is usually good and is often excessive, though it may be deficient. Emaciation and pallor indicating anemia and failing nutrition always develop at some stage of the marked cases that are not arrested early. In a considerable proportion of the bad cases, there is a more or less severe burning pain, especially at the height of digestion, though it may come on at any time during the digestive period and last till the stomach empties itself either by vomiting or propulsion into the duodenum, unless relieved by alkalies or anodynes.

Spasm of the pylorus frequently results from the irritant action of the excessively acid gastric contents, with stagnation and retention of food and secondary dilatation of the stomach, just as it occurs in obstructive stenosis of the gastric outlet. Before its walls have weakened, there may be violent and excessively painful cramps of the stomach from the same cause.

Since salivary digestion is arrested very early in the stomach in this disease, there is likely to be a large amount of fermentation of the starchy foods. In decided cases this takes place not only in the stomach, but also in the small intestine, since the gastric contents continue acid after passing through the pylorus and thus inhibit the action of the pancreatic and intestinal juices which require an alkaline or at least a neutral medium.

The yeast fungi seem to thrive in spite of the largest percentage of HCl ever found in the gastric juice, and in all the typical cases of sthenic gas-

tritis that I have studied, the microscope has revealed myriads of them in every slide prepared with a drop of the stomach contents, especially if obtained toward the end of the digestive period.

The diagnosis of acid gastric catarrh is established by finding upon repeated analyses of the gastric contents obtained an hour after the Ewald test breakfast a large excess of free HCl—upward of .1 per cent.—along with a considerable secretion of mucus from the stomach itself. There may or not be also gastric ulcer present which, when it thus coexists, is probably always either a result or accidental complication, and never the cause of the hyperchlorhydria, though the contrary view has been advanced. Even a moderate percentage of free HCl—.06 to .1—if persistent and associated with a profuse secretion of mucus in the stomach and with the symptoms above described, would warrant the diagnosis of chronic acid gastritis, since in the other forms of gastric catarrh the proportion of free HCl is always much below the normal.

The diagnosis of sthenic gastritis in its simple form from the same complicated with round ulcer is not always possible, since the latter may exist without its usual typical symptoms. In the latter case, however, you would generally find a markedly abnormal sensitiveness to pressure somewhere over that portion of the stomach which extends below the ribs, most frequently in the middle line and near the sternum, as well as over a small spot to the left of the spine near the origin of the eleventh or twelfth ribs. There should be signs at times also of gastric hemorrhage (blood in vomit or stools) and the symptom of pain aggravated always by food, especially when in a solid form and still more if very coarse; but these may be wanting.

In uncomplicated acid gastric catarrh, without ulcer, vomiting is not common except in the worst cases, and there is never hematemesis; the pain is generally relieved by taking bland forms of albuminous food, such as milk or soft-boiled eggs, and often also by the ingestion of meat or even bread, while no foods afford any relief to the pains of ulcer and the coarser aliments nearly always aggravate such pains at once. Furthermore, the pain of acid gastric catarrh may be almost certainly relieved by full doses of alkalies, but not so that of gastric ulcer, whether accompanied or not by acid gastritis.

It would be a great achievement if, by means of ever so elaborate urinary analyses, we could certainly determine whether the stomach glands were secreting a normal proportion of HCl, or whether any departure from the normal in this respect was in the direction of excess or deficiency. Many able men have experimented in this field and Boas, in his "Magenkrankheiten," has discussed the results somewhat fully. These have not been very satisfactory. I have made a number of experiments in the same line, and my results were contradictory. It is probable, however, that eventually methods will be perfected by which approximately accurate conclusions as to the gastric secretion may be reached in this way.

Repeated analyses of the gastric contents in connection with the

symptoms will be sufficiently diagnostic, as a rule; but you may often find in the wash water after lavage fragments of the mucous membrane in which the microscope will reveal proliferation of the border and chief cells especially. In the older cases, many of the cells may be seen to have undergone granular and mucoid degeneration and vacuolation (Van Valzah and Nisbet). So much importance is placed upon the microscopic demonstration of these cases by Hemmeter that he advises snipping off a piece of the gastric mucous membrane by an instrument devised for the purpose, when a suitable specimen cannot otherwise be obtained.

In a subsequent talk, the treatment of this very prevalent and important form of chronic gastritis will be fully discussed.

SYPHILIS—SECONDARY AND TERTIARY SYMPTOMS.

BY J. D. THOMAS, M.D.,

Professor of Genito-Urinary Diseases, Western Pennsylvania Medical College; Genito-Urinary Surgeon to the South-Side Hospital, Pittsburg, etc.

The secondary stage of syphilis is the explosive, the active stage. Until this time the virus is being quietly, gradually but surely carried along the lymphatic system, in a direction from the chancre, and when it is finally discharged into the vascular system we have, as a rule, a rise of temperature (from 99° F. to 104° F.), a general eruption, sore throat, headache, and, a little later on, a loss of the hair, from fracture of the hair shaft near the scalp, mucous patches, bone pains, and an enlargement of all of the remaining lymphatic glands in the body. Before the period of eruption the blood remains free from the germs of the disease and is not contagious; not so, however, with the secretion from the chancre or the contents of the lymphatic canals and glands. With the above ensemble of symptoms in a patient, one may be sure that it is a case of syphilis; and, when sought for, a chancre will be found somewhere upon the body.

Another aid will be the character of the eruption. Although the first eruption is usually, in the main, a macular one, still some papules will be found on the scalp, a few on the body and some of these scaly—a polymorphous eruption—a condition found in no other eruptive disease. Again, if the eruption is a papular one at first we will find some pustules, some macules and some scaly papules. It matters not which syphilide appears first, there is *always some tendency to polymorphism.*

The eruption of the secondary stage involves the more superficial structure, such as the outer layers of the skin, the periosteum, etc., and does not leave scars. With the tertiary eruption it is different; here all the layers of the derma are, or may be, involved, as well as the osseous structures, and when absorption or ulceration takes place scarring is the result. The

secondary eruption is due to capillary dilation with more or less exudation at the areas of capillary dilatation. This probably takes place in all the tissues of the body, but the exudate is only sufficient in amount or extent to produce a general *malaise* and an interference with the general nutrition of the body, and if the case is not treated these congestions sometimes produce serious results, as is witnessed in the iris and the intense headache due to meningeal or arterial congestion. In the tertiary lesions we have those that tend to involve a greater amount of tissue, and instead of being general in their character they are circumscribed. We may have one testicle involved, a large patch of tubercular eruption may appear upon the face or arm, or a gumma upon the leg. When the deposit takes place in some of the arteries of the brain we have a limited paralysis, which paralysis indicates the portion of brain involved. The tertiary lesions occur in the tissues made vulnerable by the preceding secondary lesions. Tertiary syphilis, so-called, then, is a sequel of veritable syphilis, and is not contagious.

Modern syphilographers have adopted, with some modifications, the classification of Cazenave. This is much more logical than using such terms as syphilitic psoriasis, etc. It would be just as consistent to call the macular eruption syphilitic measles. I find the following a convenient method of tabulating the syphilides, viz.:

SYPHILIDES.

Erythematous	Macularform, Maculo-papularform.	Pustular	Acneform, Variolaform, Impetigoform, Ecthymaform, Rupiaform,
Papular	Lenticularform, Papulo-squamousform, Moist-papularform, Miliaryform.	Tubercular	Tubercularform, Gummatousform.

BULLOUS.

The bracket at the right includes those syphilides that we may encounter in the late secondary period as well as in the tertiary period.

The bullous syphilide is seldom encountered in the adult, although I have seen such a case the present year, but occurs in the infant when the disease is inherited, and, while seldom recovered from, is not necessarily fatal, as I know from observation.

Surgeon-in-Chief to the Pope. Dr. Mazzoni, whose operation for the removal of a necrotic lipoma from Pope Leo XIII. has been widely told by the lay press, has been appointed by the Pope as his surgeon-in-chief.

CLINICAL REPORTS.

CASES OF ECLAMPSIA, ELEPHANTIASIS, NEURITIS, AND BRONCHIECTASIS.

BY L. SMIRNOW, M.D.,
New Britain, Conn.

I. *Eclampsia.* Mrs. X., aged about thirty, and pregnant, has had four children, two of whom are living. Previous pregnancies and labors were uneventful, though she always lived in poor circumstances and could not afford the proper care of her general health. I was called to relieve her of an attack of indigestion, as it was stated, and when I arrived at the house (about noon time) I found her suffering from headache, nausea, retching, heaviness in her chest, a "load in her stomach," and shortness of breath. There was no little restlessness and anxiety manifested by the patient, but having been informed of her eating, on the previous evening, a quantity of green vegetables and cold beef, and of her bowels being costive, I thought it the more necessary to administer an emetic and a rectal enema of about three quarts of water. This afforded her some relief, so I ordered another emetic given an hour later and a mustard paste applied over the epigastrium, and cautioned her husband to watch the case carefully and report at the earliest possible moment any unfavorable developments. No sample of her urine was then obtainable, so I took none for analysis, neither did I deem it necessary, for the symptoms were quite deceptive, as may be seen. At about three o'clock in the afternoon the woman commenced to have convulsions, yet the husband did not apparently think this a very unfavorable development, since he did not report it until nearly eight in the evening. Probably, as the poor often do, he thought he would wait and see if it did not pass by of itself, until he waited too long. I hastened to the house and found the patient in a true eclamptic seizure, clonic and tonic spasms alternating in rapid succession, with high temperature, a weak and rapid pulse, frequent and short respirations, fixed eyes, and other well-known symptoms. My prognosis was at once unfavorable, but I proceeded to do the only thing possible to offer some slight chance of recovery, the delivery of the fetus. It was then nearly nine o'clock, and getting things ready and aseptic, and sending for an assistant to administer chloroform, took nearly another hour, so that she was not relieved of her uterine contents till about ten o'clock in the evening. Convulsions continued, however; and, notwithstanding all efforts, she died at about two in the morning. The fetus (dead, of course) seemed of about seven months' gestation, although the husband said she was supposed to have been in her eighth month.

The case is remarkable for the short onset, severity of the symptoms, and rapidity of its course, on which account, I firmly believe, had delivery been

induced even that morning, when the symptoms first appeared, she would not have recovered.

II. *Elephantiasis.* A young lady, unmarried, aged about twenty-two, German parentage. Health good, but for a lymphedema of the lower limbs, thighs, hips and vulva, increasing their size to at least twice the natural. She had been treated by various men in various ways, without any beneficial results, until finally tight bandaging from the toes upward, and silver nitrate and the tincture of iodin applied as counter-irritants to different parts, gave her much relief and reduced the swelling to some extent. Extirpation of the labia majorae was decided upon, at which operation I had the pleasure of assisting. It was performed skillfully, the wounds healed by first intention, and the labia minorae well assumed the place of those removed. But about a week later a febrile condition developed which reached to 102.5° and 103° F.; the heart's action was much impaired and the pulse rapid and weak. There was also effusion in the pleural cavities, impaired respiration as a consequence, loss of appetite and general depression; but, most remarkable of all, the joints, particularly the wrists and metacarpal and phalangeal ones, were red, tender, swollen, and filled with a purulent fluid that appeared in drops under the skin and was also obtained by tapping. A few days later the patient died of septicemia. In talking the case over, the attending surgeon thought the affection to be a generalized erysipelas. This, of course, was purely conjectural, the more so since the seat of operation presented not even a sign of inflammation. I suggested that it might be suppurative arthritis resulting from a latent arthritic condition, an acute attack of which she may have had some time ago, and which was now excited into action by the constitutional disturbance produced by the operation; and, also, that the effusion into the pleural cavities was probably produced by the absorption of the toxic material. Inquiring afterward of the patient's friends, the doctor found that about two years ago she had a wrist and one or two other joints similarly swollen and tender, but they had subsided shortly after.

III. *Neuritis.* This case, in my opinion, is worth recording on account of the obstinacy and progressiveness of its course. The patient is a robust man, about thirty-five years old, a Russian, and by occupation a tailor. In the autumn of 1895 he had a nodular swelling appear in the palm of his right hand, red and painful. He attributed it to his ironing and rinsing of wet cloths during his work; but, finding that it did not improve, he sought medical advice. I took it to be an inflammation of a peripheral palmar branch of the median nerve, as the pain radiated to the thumb and index fingers, and thought that with appropriate treatment it ought to subside. But, as he could not stop his work, and thus remove the real cause of his trouble, the prospects for recovery were somewhat less, and the prognosis was qualified accordingly. Heat in the shape of poultices, steam, and vaporization was for a long time faithfully applied, and nerve-tonics given in full doses, including nux vomica, strychnin, arsenic and

phosphorus. Analgesics and antineuralgics, particularly the salicylates and lithias, were given in large quantities, and also alteratives, mostly potassium iodid in the syrup of sarsaparilla, and cod-liver oil. Faradization was administered for a long time, while the list of local applications, from the blandest ointment to blisters and leeches, was too long even to be mentioned. Temporary improvements followed one or other of the treatments, but the disease soon augmented.

After a few months of such a course, I advised operative interference, either neurectasy or neurectomy, as might seem best. To this the patient would not submit, although his system was getting reduced and his strength waning. He sought the assistance, at different times, of over a score of other physicians, mostly in New Haven and in New York, among whom were some prominent men, but, strange to say, none of them, except Dr. Carmalt, of New Haven, diagnosed the case properly, but considered it to be one of rheumatism. This is, indeed, more strange, since by this time several other branches of the nerve became affected, and the disease took on the "ascending" character. In the forearm, over the median nerve, a tender swelling, red and warm, would occasionally appear and subside in a few days; the back of the hand at times presented the same symptoms, and occasionally he felt pain near the shoulder. Later the right arm improved, but the left one became similarly affected. He also had a touch of it in the right sciatic nerve, which, however, soon passed away. All this time he had been working at his trade, except at the height of these attacks, and even then to some extent when he had much to do, but had constant treatment, mainly now, however, against rheumatism. It goes without saying that he tried all the quack nostrums and panaceas he could lay his hands on, not a few amulets, a red band around his wrist, and some oil from a holy shrine. By my advice, and by that of others, he also used sulphur baths, salt-baths, and the like. Recently he came again under my care and, to my regret, what should have been tried first was tried last. I discontinued all remedies, internal and external, and ordered local applications of ice, or a freezing mixture, for fifteen minutes three times a day; and there was the charm of its action. The disease at once subsided, and so long as he makes the cold applications he is well: but, growing careless, he fails occasionally to carry out the directions and thus has slight relapses, for which reason I still advise him to have operative treatment.

IV. *Bronchiectasis.* I report here a case not only of a peculiar character but one exhibiting also what may be termed a therapeutic wonder. It is that of a woman, aged forty-six and born in Russia, who gives a history of traumatism of the chest received some twenty-four years ago. As a consequence, she was for several weeks confined to bed with lung-fever, but made a good recovery; not, however, without to the present time retaining a neuralgic pain on the right side, a little above the hepatic region, and a constant cough with expectoration. What she expectorates, however, is not ordinary mucus, but a fetid secretion, yellowish, semi-solid and occa-

sionally frothy, much like coagulated or solidified pus, and having a very offensive odor. It was this that embarrassed her most, as oftentimes, when she coughed and expectorated, people would be forced to leave the room on account of the odor, and this was of daily occurrence. Yet in all these four and twenty years that she had been treated for it, both in Russia and in this country, she obtained not the slightest relief. Physical examination revealed in the lower lobe of the right lung, just above the hepatic region, a localized area of dullness, almost the size of a circle of a two-inch radius, which gave all the physical signs of a circumscribed abscess. Vesicular breathing was entirely suppressed, and tactile fremitus and vocal resonance were wanting. Outside the borders of this area and throughout both lungs respiration was normal, and physical signs showed no defects, which must therefore exclude any possibility of the case having been putrid bronchitis. It must have been, then, a dilated, sacculated bronchus, as a sequel of the old inflammation, continually secreting the fetid mucus and pus—the condition known as bronchiectasis.

The treatment had to be entirely experimental, since no medicine had had any direct effect on the disease. I therefore prescribed a mixture containing 50 c.c. of peroxid of hydrogen, 10 c.c. of listerin, 2 c.c. of the oil of anise, and water enough to make 100 c.c., of which a teaspoonful was to be taken three times a day; hoping, against any possibility whatever, that the peroxid would in some way reach the seat of the trouble, and exert its germicidal power. But I have great reliance on the sulphate of codein in many kinds of coughs, and, although it would almost seem to be counter-indicated in this case, I ordered ¼ grain tablets of it to be taken four times a day. The result was instantaneous. For the first time in twenty-four years the patient knew what it was to be free from pain, or to be free from the cough and that horrible smell, or to be able to lie on her right side without any discomfort. The surprise was no less pleasing to me than to her, for, to be frank, I did not expect any results. Yet I told her that her complaint could not be completely cured, unless surgically treated. Later I varied the doses of the peroxid and added the aromatic spirits of ammonia, in various proportions, and gave expectorant mixtures, maltine, and the like, but soon found that it was the codein that did the work, as a few weeks after she stopped the use of it the cough would return, though never to such a degree as before. I therefore prescribed the codein in different ways, in solution, capsules, tablets, pills and powders, and then so regulated the doses and time of taking it, that she would not become used to the drug. The seat of the trouble being superficial and easily located, I advised the opening and draining of it, but the patient has done so well for nearly two years under the treatment that she is quite content.

It may be said that morphin might have done the very same thing; but, while I am not ready to concur in this, even if it could, it were not wise to administer it, for soon the treatment would prove worse than the disease; while codein could be her daily food, if need be, without causing any injury.

SELECTIONS.

REPORT OF A TRIPLET BIRTH, ONE SINGLE CHILD AND A WELL-DEFINED CASE OF THORACO-GASTRODIDYMUS.

BY G. W. THOMPSON, M.D.,
Winamac, Ind.

It affords me great pleasure to be able to present a correct photographic reproduction of the most wonderful monstrosity, perhaps, ever seen, a triplet birth with one single child and a well-defined case of Thoraco-Gastrodidymus—one perfectly formed body, with two heads, two necks, four arms and hands, four legs and feet, in fact, two perfectly well-formed children in all respects except the absence of one body. The one body seems to have been moulded by the handiwork of nature as perfectly as though it had been intended for a single child, except, perhaps, a little larger in the thoracic region, as may be seen from the picture. The single child is a male, and weighs three pounds; the Thoraco-Gastrodidymus are females, and weigh four pounds. They were born at the seventh month of gestation.

A TRIPLET BIRTH.
One Single Child and a Well-Defined Case of Thoraco-Gastrodidymus.

On the morning of the 18th of February, 1899, I was called to attend Mrs. J. R. in her first confinement. On my arrival, I was informed by the good ladies in attendance that a child had been partly born, feet first, for more than two hours. On examination I found a male child with lower extremities and pelvis born, with the thorax, arms and head resting in the vagina and uterus. A very little assistance was required to accomplish the

delivery of a still-born child. The cord was severed and the usual attention given to the child, but any attempt at resuscitation proved a failure. After having exhausted all efforts at resuscitating the child, my attention was turned to the mother. I made an examination to ascertain the condition of the placenta. This examination revealed to me the presentation of the head of another child, and I so advised the mother and others present. I admonished the mother to be of good cheer, as I hoped we might be able to save the second child, though the birth was premature. At this suggestion she appeared to renew her courage, and soon after the pains returned. She labored hard for more than two hours, but apparently could not relieve herself, notwithstanding the amniotic fluid escaped and the child's head passed well down into the inferior strait of the pelvis. I could not account for the delay in what I supposed was a plural birth of a second child, with the head presenting normally, and everything else to all appearances favorable for a speedy delivery. At this stage of the labor I carefully prepared my hands, using the usual antiseptic precautions, and, passing my hand through the vulva and well up into the vagina, I clasped the head of the child between my thumb and fingers and made forcible traction as the pain came on. In my efforts to force the child down I felt something slip which caused a sudden jerk. This prompted me to investigate further, when I found the head of another child presenting at the superior strait. A forcible pain soon came on, and the birth of two children, instead of one, was the result, each one breathing independently of the other, showing conclusively that each of them was in possession of a separate set of respiratory organs. All efforts were made to keep the children alive, but to no avail. They died at the expiration of twelve minutes. After the birth of these last children the mother was for some two hours in a very critical condition, and appeared at times as though she might succumb at any moment. This, of course, made the situation all the more serious. She suffered from the shock caused by the severe labor, and also post-partum hemorrhage, which occurred shortly after the second birth to an alarming extent. This, with the loss of the children, and the thought of having given birth to this wonderful monstrosity, caused the shock from which more than two hours were required before reaction could be brought on and the hemorrhage entirely controlled. She finally rallied from the shock and went on and made a good recovery. No rupture of the soft parts resulted.

The male child was separate from the female in all respects, being supplied with a separate placenta and being surrounded by a separate amniotic membrane. The females were both in a single amniotic sack, and were attached by a single cord and one placenta. The placentas were not adhered, and were removed without any trouble. The post-partum hemorrhage resulted from shock and relaxation of the muscular fiber of the uterus, caused by a very exhausting labor.

The parents of these children are Americans, the father being twenty and the mother twenty-two years of age. They are a strong, healthful couple, and have informed me that the mother passed through the time of gestation without any unpleasant symptoms, escaping to a very large degree the usual morning sickness that is so troublesome to very many women from the second to the fourth month of gestation. The parents of this wonderful freak presented me the babes for preservation. I accepted their kind offer, and now have all three of them in a most beautiful state of preservation, and will, in a few days, transfer them to Rush Medical College, my *alma mater,* and place them in the museum.—*Cleveland Med. Gazette.*

Disappearance of the Uterus by Superinvolution. Porak reports, before the Society of Obstetrics and Gynecology of Paris, a very unusual case. The patient was a primipara, aged 21. She had a generally-contracted pelvis, the diagonal conjugate diameter measuring 10.5 cm. After a labor of 72 hours, she was delivered by forceps; the perineum was then found ruptured to the anus, and the external genitals were the seat of sloughs. The patient was very collapsed. Two days after there were sloughs of the vagina and cervix as well as of the vulva. For 10 days the patient was in a most critical condition. The temperature went up to 40°C., and for several days cold baths were resorted to at a few hours' interval. The lochia were offensive, and contained blackish *débris* derived from the cervix. Diarrhea set in, and albuminuria with scanty urine was shortly associated with delirium, followed by coma. The patient, however, slowly improved, leaving the maternity a month after confinement. Five weeks after leaving she reported herself. On making an examination, the vagina was found partly obliterated by adhesions; some of these were easily separated, and the finger reached a *cul-de-sac.* No trace of cervix was present, and, bimanually, the uterus proved to have disappeared completely; this was confirmed by rectovesical palpation by means of a finger in the rectum and a sound in the bladder. The vagina was denuded of epithelium in a great part of its extent. For some weeks the patient was kept under observation, and it was only by means of continual packing that the vagina was prevented from becoming obliterated by adhesion of its walls. A new lining was therefore made for the vagina by transplanting from the thigh two pieces of skin, 3 and 5 cm. respectively in diameter, and two smaller pieces each 1 cm. in diameter. This procedure was entirely successful, and the reconstructed vagina admitted the finger. When last seen, 5 months after confinement, sexual relations had been carried on without difficulty. There had been no menstruation during these 5 months. Porak attributed the disappearance of the uterus to superinvolution, and in the discussion on this paper Doléris took the same view.—*Brit. Med. Jour.*

REVIEW OF MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE GENERALLY.

UNDER THE CHARGE OF

WILLIAM EWART, M.D. (Cantab.), F.R.C.P. (Lond.),

Senior Physician to, and Joint Lecturer on Medicine at St. George's Hospital; Physician to the Belgrave Hospital for Children,

FRANK BILLINGS, M.S., M.D.,

Professor of Medicine, Rush Medical College, Chicago; Attending Physician Cook County Hospital and St. Luke's Hospital; Consulting Physician to Charity Hospital, etc.,

WILLIAM E. HUGHES, M.D.,

Professor of Clinical Medicine, Medico-Chirurgical College; Visiting Physician to the Philadelphia Hospital; President of the Pathological Society; Pathologist to the Presbyterian Hospital, etc.,

AND

WILLIAM EGBERT ROBERTSON, M.D.,

Pathologist to the Episcopal Hospital, Demonstrator of Pathology, and Physical Diagnosis, Medico Chirurgical College.

The Contraction of the Palmar Aponeurosis in Diabetes. Marechal (*Commun. before la Soc. Belge de Neurol.*) contends that diabetes is capable of producing tropho-neurotic changes by acting either on nerve centres, peripheral nerves, or in some manner as yet unexplained, and mentions especially retraction of the palmar fascia, a symptom little known, and upon which bibliographical references must be very rare, for he only found one, viz., *"Thèse de doctorat de Viger,"* published in 1883. Since then the author has had the opportunity of studying 2 cases: (1) Woman of 65, with sciatica, whose urine contained 60 grms. of sugar per liter. She also had typhical palmar contraction. The diabetes seemed to be hereditary, for a brother died in diabetic coma. No gout or rheumatism existed in her parents. Her son, aged 41, showed neither rheumatism nor diabetes, but had beginning palmar contraction, the little finger of one hand only being strongly flexed. (2) Man, aged 58, robust, good family history. He was a well-to-do merchant, his station having been the result of hard work. During 5 years he had been growing more nervous and irritable, subject, at times, to attacks of depression. Latterly the onset of polydipsia directed attention to the urine, which was found to contain 8-15 grms. of sugar per liter. He had noticed during 4 or 5 years a progressive contraction of the palmar fascia of both hands, until finally firm cicatricial bands permanently flexed the fingers upon the hand, producing the typical contraction of Dupuytren, who first described it. Dupuytren regarded it as being due to pressure of tools, but it is found bilaterally, even in those who do not habitually use tools, and it has been observed in a child of 6. Hence it has been regarded as diathetic, gouty or rheumatic, but seldom has it been ascribed to diabetes. These disorders are related to disturbances of nutri-

tion and to one another. It is well known that the descendants of a gouty individual may develop diabetes, or *vice versa* (Charcot). In many subjects diabetes and gout may occur coincidently. Durand-Fardel in 270 cases of diabetes, found 23 with gravel and 10 with gout. Just as Dupuytren's contraction is found in diabetes without any evidence of rheumatism, so is it found in polyuria-non-saccharin, for these conditions belong to the neuro-arthritique family. It seems probable, therefore, that palmar contraction belongs to the tropho-neuroses, and that it is induced by some alteration in the peripheral nerves or in the centres. The fact that it is almost always bilateral lends support to this view.

Three Cases of Tachycardia. J. M. Finney (*The Med. Press,* June 21, 1899). Case 1. Elderly lady, with chronic valvular and arterial disease, had had several attacks of tachycardia. Suddenly, with little or no apparent cause, the pulse would rise from 76 to 160, remaining rapid 4 to 6 hours, when it would return to its usual rate. The patient was not inconvenienced by the attacks. Case 2. Woman, 52, at the climacteric. No valvular or other disease of the heart. Apparently without cause, the heart would suddenly begin to beat rapidly, as much as 200 to 240; the patient, complaining of a sense of substernal oppression, would sit propped up, expression anxious, no dyspnea or cyanosis, and extremities warm. Several attacks followed, and as she gained the assurance that they were not necessarily dangerous, she bore them with equanimity. They did not prevent her from riding a bicycle, nor did the exercise seem to have any influence on the condition. During 13 months' travel on the continent she had no attacks, but they recurred on her resumption of household responsibilities, due possibly to the trouble and care connected therewith. Case 3. Woman 23, servant, previously healthy. Had an acute attack of inflammation of the throat, fever, temperature 104°, pulse 140. This attack lasted 4 days, when the temperature became normal, but tachycardia became pronounced, and the pulse rose to 160, finally to 240. This rapidity persisted 16 days, until her death. At no time did she complain about her heart. She experienced neither palpitation, oppression nor dyspnea. She was seized suddenly with pain in the right leg and foot, with loss of power, and on the following day she suffered acutely with pain in the calf of the left leg. Gangrene quickly supervened, mummification of the left, and of the right foot, moist gangrene with the formation of bullae. Pulmonary congestion, albuminuria and hematuria developed before her demise. Tachycardia is a rare condition, and very few necropsies have been made on subjects of this condition. It is due either to paralysis of the inhibitory nerve of the heart, or stimulation of the cardiac accelerators. The condition may come on without apparent cause, occurring at almost any period of life, and is paroxysmal and sometimes periodical. In Case 3, here recorded, the probable explanation is that of toxic influence on the cardiac ganglia. The myocardium was found healthy and the organ not dilated.

A Case of Diabetes Mellitus Quickly Following Mumps. Harris (*Boston Med. and Surg. Jour.,* May 18, 1899) reports the above condition in a farmer, white, aged 42. Family history negative. Patient never sick

till he had mumps. About a month later he noticed that he passed more urine than formerly. The amount voided gradually increased, thirst developed, appetite large, bowels irregular; he has lost much weight, eyesight poor, and from the onset he has had more or less salivation. Urine was found to contain 4.6 % glucose. The saliva contained traces of glucose. Blood examination showed 3,957,500 erythrocytes, white cells normal, hemoglobin 95%. The man was lost sight of, as he failed to continue to attend the clinic. The point of interest is the possible etiological relation between mumps and diabetes. It is well known that structural alterations may occur in the parotid after mumps, as they may also in the sublingual and submaxillary glands, testicle, prostate, ovary, mammary gland, kidney, thyroid and cervical lymph glands. It is certainly possible that the pancreas, a gland closely resembling the parotid, may also at times become altered, and, as von Mering has shown, structural alterations in the pancreas are capable of producing diabetes. The writer and Reale have both been able to bring about a mild glycosuria on dogs by the removal of the salivary glands. That marked changes in the salivary glands may occur in diabetes is proved by the author's case as follows, but their etiological significance is not so clear: J. H., aged 63, male, white, affected with diabetes. Without reciting details, suffice it to say he had had the disease 15 months, that he developed pulmonary tuberculosis and diabetic gangrene. At the necropsy the following conditions were found: Atheroma of vessels of base of brain, tuberculosis and abscess of lung, tuberculous ulcers of lower part of ileum, atrophy of pancreas and of salivary glands, closure of cystic duct, gall-bladder adherent to duodenum, ulceration of walls of these latter with consequent communication of their cavities. The changes in the pancreas and salivary glands, however, are of chief interest. In them the interstitial tissue was much increased—not uniformly so, however. In places the pressure has been so great as to destroy some or all of the acini in a lobule. As a rule every lobule is separated from its neighbor by bands of more or less organized connective tissue, but here and there 2 or 3 normal lobules may be found together. The excretory ducts are necessarily involved, often being much reduced in size and distorted. In a summary, the author suggests that, as diabetes may quickly follow mumps, there is a suspicion that they stand in the relation of cause and effect. The pancreas and salivary glands are of very similar structure, and it is very probable that mumps, which is capable of inducing changes in the one, may do so in the other, and that these changes may become chronic, ending eventually in such a degree of impairment as to bring about diabetes, at least in those cases where the pancreas is chiefly involved.

The American Protologic Society is the title of an organization effected June 7, 1899, during the meeting of the American Medical Association at Columbus. The object of the society is the study of rectal diseases. The elected officers are: President, Dr. Joseph M. Mathews, Louisville, Ky.; vice-president, Dr. Jas. P. Tuttle, New York City; secretary and treasurer, Dr. William H. Beach, Pittsburg, Pa.; board of counsellors, Dr. Samuel T. Earle, Baltimore, Md.; Dr. A. Bennett Cooke, Nashville, Tenn.; Dr. J. Royal Pennington, Chicago, Ill.

DISEASES OF THE CHEST.

UNDER THE CHARGE OF

A. E. SANSOM, M.D., F.R.C.P.,

Physician and Lecturer on Clinical Medicine in the London Hospital; Consulting Physician, N. E. Hospital for Children; Physician, Royal Albert Orphan Asylum; Physician, Royal Hospital for Diseases of Chest, etc.,

AND

JOHN H. MUSSER, M.D.,

Assistant Professor of Clinical Medicine, University of Pennsylvania; Physician to the Philadelphia and Presbyterian Hospitals, etc.,

ASSISTED BY

J. DUTTON STEELE, M.D.,

Assistant Demonstrator Morbid Anatomy, University of Pennsylvania.

The Gelatin Treatment of Aneurism. Dr. Futcher (*Johns Hopkins Hosp. Bull.,* May, 1899) recently exhibited 4 cases of aneurism treated by the injection of a solution of gelatin into the subcutaneous connective tissue. Three of these were of the thoracic and one of the abdominal aorta. Patient 1 received 6 injections and died of perforation. No clotting was found in the sac. Patient 2 had 28 injections and has sensibly improved. Patients 3 and 4 had 16 and 21 injections respectively, with little or no improvement. In the last case the coagulability of the blood was markedly increased. The solution used was a 1% solution of gelatin in normal salt solution, the whole being thoroughly sterilized. Of this, 250 c.c. were given, at intervals of from 2 to 15 days, and the injections were made as far from the sac as possible, usually in the loose areolar tissue of the thigh. Considerable pain accompanied all of the injections. The beneficial effect of the treatment is supposed to be due to the increased coagulability of the blood. Laucereaux, who introduced the method, holds this view. Laborde claims that gelatin is not absorbed from the peritoneal cavity of rabbits. Camus and Gley found no increased coagulability after injections. Welch, in the discussion, suggested that the presence of an excessive number of platelets in the blood had perhaps more to do with a tendency to thrombosis than an increased amount of fibrin-forming factors, and called attention to the fact that the coagulum of an aneurismal sac is a true thrombus, and so differs from a coagulum formed outside the body.

A Case of Lymphatic Leukemia Combined with Pulmonary Tuberculosis. Baldwin and Wilder (*Amer. Jour. of the Med. Sc.,* June, 1899) report an interesting case from the Saranac Laboratory, of a man of middle age suffering from tuberculosis of the lungs. Two months before death the blood was examined, and was found to contain enormous numbers of lymphocytes and the other evidences of true lymphatic leukemia. The patient had developed lymphatic enlargements simultaneously with the pulmonary involvement. Which disease was primary? The autopsy showed typical lesions of tuberculosis of the lung, and great enlargement of the lymph glands all over the body, apparently without tubercular involvement. There were also deposits of lymphoid cells in the viscera. The in-

fluence of each disease upon the other is hard to determine. It may have been a case of pseudo-leukemia, transformed into true leukemia, as in cases reported by Martin and Mathewson and by Cabot. The authors remark that the comparative frequency of so-called pseudo-leukemia combined with tuberculosis as the suggestive cause of the lymphatic hypertrophy argues their case to have been of this nature in the beginning. They have collected 12 similar cases.

On the Question of Hypertrophy of the Heart. Michailow (*Bolnits. Gaz. Bot.,* Vol. X., Nos. 15 and 16) has performed some very valuable experiments in the laboratory of Prof. Sirotinin with a view of determining the cause of cardiac hypertrophy in renal disease. These experiments were performed on 14 animals, 6 dogs and 8 rabbits. On 3 of the dogs ligation of a renal artery was practiced, while on all the others the ureter on one side was ligated. For macroscopic comparison, the average weight of the heart of rabbits established by Tangl and that of dogs by Timopheero, were taken. The hypertrophy was, moreover, determined by microscopic examination, a method which has not been employed, as a rule, by other investigators of this subject. It was observed that the hearts of the animals killed 12 to 20 days after the operation did not present any appreciable macroscopic changes. The increase of weight was found 40 days after the operation, while in 2 to 2½ months the hypertrophy was quite marked. The histologic changes also varied with the time. Not before the twentieth day an increase in number of the nuclei was noticed in the walls of the heart, later the muscle fibers also multiplied, and, at the expiration of 60 days, insterstitial changes had taken place. The blood vessels of the heart, as well as the body, presented a diffuse sclerosis, and simultaneously there has taken place an enlargement of the old and formation of new capillaries in the heart. The endocardium also showed signs of irritation. The heart ganglia underwent changes of a very important nature, changes which, the author believes, were never observed before. These were direct and indirect division of the ganglionic cells. As to the causative factor of cardiac hypertrophy, the author is altogether inclined to the belief that it resides in the irritation produced by the poisonous products of metabolism retained in the blood as a result of the existing nephritis. A. R.

Restrictions as to the Handling of the Plague Bacillus. We learn through the *Indian Medical Record* (May 31, 1899) that the Indian Government, warned by the careless manner in which cultures of the bacillus of plague have been handled, has adopted stringent rules regulating the exportation of this dangerous commodity. The Australian Government refuses to permit the importation of the organism; while in France, legislative enactment has regulated the precautions to be observed in all bacteriologic laboratories. The fatalities from plague in the Vienna laboratory have not failed to teach the danger of such experimentation.

DISEASES OF THE DIGESTIVE SYSTEM.

UNDER THE CHARGE OF

SIDNEY MARTIN, M.D. (Lond.),

Professor of Pathology in University College; Physician to University College Hospital; Assistant Physician to Hospital for Consumption, Brompton, England, etc.,

BOARDMAN REED, M.D.,

Philadelphia,

AND

A. ROBIN, M.D.,

Pathologist and Bacteriologist to Delaware State Board of Health.

Anachlorhydria in Ulcer of the Stomach. Krokiewicz (*Przeglad lekarski,* 1898, No. 49, *Bolnits. Gaz. Bot.,* Vol. X., No. 3) reports several cases of ulcer in which not a trace of free HCl could be found in the stomach prior to hemorrhage; especially was this the case whenever there were several ulcers. The author believes that the absence of free HCl always points to the danger of a severe hemorrhage. In doubtful cases, where a differential diagnosis between ulcer and cancer is to be made, the blood count is the only means at command. In cancer, when cachexia has developed, the number of red blood corpuscles will always be considerably diminished, while in ulcer even preceding death the latter will often number over 4,000,000. The author has seen several cases of multiple ulcers, the number of ulcers reaching as high as 30, and he ascribes them to embolisms.

Some Facts and Theories Relating to Auto-intoxication. Chittenden (*Proc. of the Path. Soc. of Phil.,* June 1, 1899) discusses, in a very able paper, the present status of our knowledge regarding the metabolic factors of auto-intoxication. He quotes experiments of many observers tending to establish the toxicity of many of the products of metabolism so far isolated from the urine. Adenin seems to be the only one of the nuclein bases possessing high toxic properties. In dogs, toxic symptoms, and even death, were produced by the administration of the latter substance. Hypoxanthin, on the other hand, does not produce any marked physiologic effect, either in dogs or man, being readily converted into allantoin and uric acid. All the other substances of the alloxuric group possess either negative or feeble toxic properties. Intestinal putrefaction gives rise to a large number of toxic substances, such as phenol, cresol, indol, skatol, fatty acids, gases like methyl mercaptan, hydrogen sulphid, and methane, together with the diamins, such as putrescin and cadaverin. Many or all of these are responsible for many cases of auto-intoxication. The toxicity of indol has been established by the recent experiments of Herter, who

found that the characteristic symptoms of indol poisoning in both dogs and rabbits are cardiac and respiratory depression, general prostration, marked contraction of the pupils, irregular clonic spasms and increased reflex excitability. When the quantity of indol injected is large, death results from cardiac failure. In chronic indol poisoning brought about by subcutaneous injections of small quantities, profound disturbances of nutrition are produced which may end in death in the course of a few weeks. On *post-mortem* examination histologic changes are found in the liver, which is congested and undergoing degeneration. In man very large doses were required to produce any toxic effect. In conclusion, the author expresses the opinion that none of these toxic substances are directly responsible for the symptoms of auto-intoxication, but their presence in the circulating blood may induce changes which produce a disturbance of nutrition of the nerve cells, and thus indirectly bring about the results observed.

On the Diagnosis of Cancer of the Digestive Organs. Lenetz (*Vratch*, Vol. XX., No. 8) calls attention to the fact that when cancer of the stomach is diagnosed during life, an autopsy often reveals cancer of other digestive organs, while the stomach is free from any malignant disease. He explains this by the absence of any single symptom or group of symptoms pathognomonic of cancer of the stomach alone. The absence of free HCl, he says, is the result of a lowered vitality of the general system, and is associated not only with malignant disease of the esophagus and stomach but with cancer of the liver, intestines and pancreas as well. Moreover, free HCl is, as a rule, diminished or totally absent in protracted catarrh or atrophy of the mucous membrane of the stomach. The presence of lactic acid is dependent on the absence of free HCl, and therefore may occur in malignant disease of any other digestive organ. [Lactic acid may exceptionally be present in any protracted case of atrophic gastric catarrh.—Ed.] Again, malignant disease of any other organ besides the stomach will diminish the muscular tone of the pylorus to such an extent that an insufficiency of the sphincter may result, and the food, together with bile, may then regurgitate into the stomach from the duodenum, thus neutralizing the acid gastric secretion. The "coffee-ground" vomit is usually considered diagnostic of gastric cancer; but, in the first place, this appearance of the vomit may be due to admixture of bile, and, again, even when due to blood, it is still not pathognomonic of cancer of the stomach. If malignant disease of any other digestive organ is associated with cirrhosis of the liver, there will occur a dilatation of the gastric veins, leading to hemorrhages, often fatal. Regarding the sarcinae, their presence always excludes a diagnosis of gastric cancer; while, on the other hand, the presence of large immotile bacilli seen without staining [the author probably refers to the Oppler-Boas bacillus] is a very strong evidence of cancer of the stomach. Of course, in the presence of a tumor, the diagnosis of cancer of any organ is clear. The enlargement of the lymphatic glands, the cachexia, etc., are also symptomatic of cancer of any other part of the body. The author in conclusion points out the similarity of the symptoms produced by cancer of the duodenum to those of gastric cancer.

NEUROLOGY.

UNDER THE CHARGE OF

WILLIAM G. SPILLER, M.D.,

Professor of Diseases of the Nervous System in the Philadelphia Polyclinic; Associate in the William Pepper Clinical Laboratory, University of Pennsylvania, etc.,

AND

J. WILLIAM McCONNELL, M.D.,

Associate in Neurology in the Philadelphia Polyclinic.

On the Localization of Intracranial Tumors. Byrom Bramwell (*Brain,* Spring, 1899) writes an important paper in which he reports 122 cases of intracranial tumor which had been under his care during life. Forty of these cases were with *post-mortem* examination, and in 2 of these (tumor of the membranes of the left lateral lobe of the cerebellum; tumor and abscess of the left parietal lobe) the presence of a tumor was entirely unsuspected during life. In one case a tumor the size of a large egg was limited to the posterior end of the second left frontal convolution, and had produced complete destruction of this part, yet had not caused agraphia. We see from this paper that a large part of the cortical motor area may be destroyed by a mere growth without causing paralysis, that Broca's zone in a right-handed person may be destroyed without causing motor aphasia, and that the first and second left temporo-sphenoidal convolutions may be cut off from the other parts of the brain in a right-handed person without causing word-deafness. In 7 of the 11 cases in which the frontal lobe was involved, well-marked mental symptoms were present, and Bramwell believes that tumors located in the frontal lobe are more likely to be attended with mental symptoms than tumors in any other part of the cerebral hemispheres; he believes, also, that the temporo-sphenoidal lobe is, *par excellence,* the "silent" area of the brain. A tumor with hemorrhage in the *right* island of Reil and adjacent parts produced motor aphasia in one case in a *right-handed* person. This might have been merely a temporary aphasia if the patient had lived longer. Bramwell says he has observed other cases in which a suddenly developed lesion (hemorrhage, etc.) in the region of the right motor-vocal speech center has produced temporary motor-vocal aphasia in right-handed persons. Tumors in the occipital lobe he thinks are comparatively rare. He reports a case in which a cicatrix of an old syphilitic gumma on the outer surface of the posterior end of the left occipital lobe produced frequently recurring attacks of sensory (visual) Jacksonian epilepsy—flashes of light referred to the right eye—followed by temporary sensory paralysis (*i. e.,* right-sided homonymous hemianopsia). In another case, irritation of the left half-vision center produced frequently recurring flashes of light in the eyes, especially in the opposite eye. Bramwell reports a case in which the symptoms were clearly indicative of a syphilitic gumma of the right leg center, but the tumor was a glioma of the right optic thalamus, and had apparently produced irritation of the leg fibers of the internal capsule. Iodid of potassium gave relief to the patient for a time. No definite symptoms

of lesion in the optic thalamus were noted in 4 cases in which a tumor was found in the thalamus; unless paroxysms of flushings, which were very marked in one case, were due to this cause. In a remarkable case in which 4 tumors were found in the cerebellum—3 in the left, and 1 in the right, lateral lobe—no symptoms of cerebellar disease, except severe vomiting, were observed. The symptoms in another case—headache, vomiting, vertigo, marked double optic neuritis, a staggering gait, etc.—led to the diagnosis of cerebellar tumor; at the necropsy dilatation of the ventricles was found and not tumor. Another similar case is reported. This excellent paper by Bramwell can be recommended to all interested in intracranial tumors.

Antistreptococcic Serum in Epidemic Cerebro-Spinal Meningitis. McNabb (*N. Y. Med. Jour.*, Feb. 25, 1899) gives the results of his use of antistreptococcic serum in 2 cases of epidemic cerebro-spinal meningitis, one of which resulted fatally. He believes that it has a decidedly stimulating effect upon the nerve centers in meningitic coma, similar to that which follows the use of warm saline hypodermo-clysters; that phagocytosis is increased, thus antidoting the diplococcus intracellularis; that purulent infection of the exudate is minimized. Very large, frequently repeated doses of from 40 to 60 c.c. may be necessary, and the injections should be continued for some time.

MEDICAL DISEASES OF THE KIDNEYS.

UNDER THE CHARGE OF

PROF. DR. KARL VON NOORDEN,

Of Frankfort, Germany,

AND

JAMES TYSON, M.D.,

Clinical Professor of Medicine, University of Pennsylvania, etc.,

ASSISTED BY

T. M. TYSON, M.D.,

Instructor in Medicine and Assistant Physician to the University Hospital; Physician to Rush Hospital for Consumption, Philadelphia.

The Quantitative Estimation of Indican. Volowsky (*Vratch*, Vol. XX., No. 17), not satisfied with the methods recommended by other authors on account of their complexity and impracticability, has devised a very simple method for the quantitative determination of indican, which is practical for clinical purposes and takes only about 30 minutes. This method—which has stood the test of 2 years' use—is as follows: (1) The quantity in 24 hours and the sp. gr. of the urine are determined as usual. Into a suitable vessel are poured 10 c.c. of 25% sol. of acetate of lead and enough urine to make 100 c.c. If the urine is highly colored, it should be half diluted with water. This is well mixed, filtered, and 5 c.c. is poured into each of 3 test tubes. (2) With a burette, pipette or dropper, the end of which is drawn into a point, so that 20 drops equal 1 c.c., 1 drop of a sol. of chlorinated potash containing 1% of available chlorin is added to the first test

tube; 2 drops to the second, and 3 drops to the third. The tubes are inverted several times for 2 to 3 minutes. Each drop represents 0.1 grm. of Cl per liter of urine. (3) To each test tube are added 5 c.c. of HCl of sp. gr. 1.19, and the tubes again inverted and set aside for 4 to 5 minutes until cooled. (4) To each tube 1 c.c. of chloroform is added, and the tube inverted (not shaken) about ten times and set aside until the chloroform settles. If the amount of indican is normal (0.006 – 0.007 grms. in 24 hours), the chloroform in the first test tube will be slightly colored, in the second more so, and the third not at all. If there is an excess of indican, more drops are added until the discoloration disappears; on the other hand, if the amount is slight, so that no discoloration of the chloroform appears in the second tube, the solution of chlorinated potash is diluted 10 times with water. Calculation: The number of drops required to produce the highest discoloration is taken as a basis. If, for instance 1.5 drops were required the amount of urine being 1,000 c.c., 0.15 grms. of Cl would be required for a liter, and for 1,600 c.c.,0.24 grms. With a normal amount of indican, the variations are from 0.2 to 0.3 grms. of Cl. To obtain the proportion of indican to the total solids the following calculation is employed: The total amount of solids is estimated by Haiser's method. Normally, it is about 65 grms. in 24 hours. To produce the highest discoloration 0.26 grms. of Cl were used, equal to 0.005 grms. of indigo, or on 10 grms. the amount of Cl required would be 0.04 grms., equal to 0.001 grm. of indigo, which is taken as the normal standard. From a large number of investigations, the author draws the following conclusions: Indicanuria is often the sole cause of many acute as well as chronic diseases. This is proved by the fact that, by removing the indicanuria, many diseases can be cured within 3 to 4 days, while by proper treatment directed toward the cure of the indicanuria relapses during the course of chronic diseases may be prevented. [The author evidently means intestinal fermentation, of which indicanuria is a symptom.—Ed.] A. R.

Floating Kidney with Intermittent Hydronephrosis. Kolisher (*Medicine,* July, 1899) states that the above condition more often occurs with floating kidney than is supposed, and that in a certain number of cases the symptoms point definitely to certain pathological conditions which furnish precise indications for treatment. He divides these cases into two groups from the standpoint of treatment; in one, if the kidney is placed in its normal position there is a copious discharge of urine, the tumor disappears and the increased urination bears some relation to the size of the tumor. In the second group the replacement of the enlarged kidney is not followed by the emptying of the distended organ unless attended with some other manipulation, such as deep massage or the catheterizing of the ureter to the renal pelvis. He thinks that the explanation of the first group of cases is furnished by a bending or torsion of the ureter due to the dislocation of the kidney. In the second group the renal pelvis may be unequally dilated, so that with the kidney in a normal position the uteral entrance is not at the lowest point of the pelvis, but is found at the bottom of a sacculated diverticulum. The directions to be followed in cases of

hydronephrosis and floating kidney are as follows: Replace the kidney and keep the patient in bed; wait twenty-four hours for the spontaneous emptying of the tumor. If this occurs, a simple anchoring of the movable kidney in its normal position is sufficient to effect a cure, and in the light of our present knowledge seems to be superior to McArthur's or Senn's operation. If, after 24 hours, no decrease in the tumor has taken place, ureteral catheterization is to be employed, accompanied by deep massage. If nephropexy is performed, it should be preceded by a nephrotomy, which should include such repair of the pelvis of the kidney as is indicated in the case; the ureteral catheter should be left in position to act as a guide during the operation.

A Case of Intermittent Hydronephrosis in a Child Successfully Treated by Operation. Setzke (*Australas. Med. Gaz.,* Apr. 20, 1899) reports a case of a boy, 10 years old, who was injured by falling from a horse. He complained of frequent attacks of excruciating pain in abdomen and back, mainly on the right side and extending to the legs, accompanied by vomiting. The urine at this time was thick and dark brown in color, after the passage of which the child always seemed to be relieved. The attacks came on weekly. Dr. Harvey diagnosed hydronephrosis. The author was called in some time after and, under an anesthetic, a tumor underneath the liver, protruding from the region of the kidney, having the size of a child's fist, was discovered. It was of circular form, not fluctuating, and scarcely movable. The urine at this time had a specific gravity of 1,021, a quantity of urates, flat epithelial cells as exist in the renal pelvis and ureters; no albumin or blood corpuscles could be found. An operation was suggested, and the only thing that could be discovered was a movable kidney, which was fastened, and after three weeks in bed the boy seemed to be entirely relieved. Since then, there has been no further trouble.

DERMATOLOGY.

UNDER THE CHARGE OF
P. G. UNNA, M.D.,
Of Hamburg, Germany,
ARTHUR VAN HARLINGEN, M.D.,
Emeritus Professor, Diseases of the Skin, Philadelphia Polyclinic; Consulting Dermatologist to the Children's Hospital, etc.,
AND
JAY F. SCHAMBERG, A.B., M.D.,
Associate in Skin Diseases, Philadelphia Polyclinic; Dermatologist to the Union Mission Hospital.

Erythema Scarlatinoides (Produced by Quinin). Taylor (*Virginia Med. Semi-Monthly,* May 12, 1899) reports a case of scarlatiniform erythema in a boy of 14, resulting from the use of quinin. The patient suffered from intermittent fever, for which quinin was exhibited in 2-gr. doses every 4 hours. After several days the fever was checked, and the patient was instructed to continue the medicine 3 times a day for some days. The day following there occurred a chill, accompanied by fever (102°) and a scarlatiniform eruption. The tongue was furred, with red

edges, the throat was slightly sore, but the patient complained of nothing except the itching. One day later the fever ceased, the only remaining symptom of importance being the eruption, which was diffusely present over the trunk, extremities and face. On the fourth day desquamation began, large flakes being cast off from the body and limbs, with almost perfect casts of the palms and soles. One year later another attack, similar, though milder, occurred. On investigation it was found that quinin had been administered by the child's mother just previous to the attack. One month later quinin was given in 3-gr. doses 3 times a day, to determine whether it was the cause of the eruption. After the use of this remedy for 3 or 4 days, the eruption again appeared and followed an exactly similar course as in the former attacks.

A Case of (Fatal) Acute Pemphigus. Hadley and Bullock (*Lancet,* May 6, 1899) describe a case of rapidly fatal pemphigus in a 23-year-old butcher. The patient had wounded his right thenar eminence on a piece of jagged bone while dressing the carcass of a sheep. On the third or fourth day blisters developed on the chin and anterior nares, followed the next day by a bullous eruption on the back of the neck, and later on the trunk, abdomen and thighs. The bullae varied in size from a pea to a large walnut. The temperature fluctuated between 99.4° and 103° F. Fresh crops of lesions developed, and the patient's condition became serious. Vomiting and severe diarrhea supervened; the pulse became frequent and feeble, and the patient died on the thirteenth day of the disease. On autopsy, the kidneys presented the appearance of cloudy swelling, the mesenteric glands were enlarged and there were evidences of hyperplasia of the lymphoid tissue of the intestines. Cover-glass preparation of the fluid of the bullae, made 2 days before death, showed the presence of diplococci. These were grown upon gelatin, bouillon and agar, and proved to be the same organism as was described by Démme and others. Inoculations of the fluid contents of the blebs and of the bouillon culture into rabbits were negative. The authors do not consider it proven that the above described diplococcus is the cause of acute pemphigus. "Its absence in the internal organs would seem to show that the disease is, to a large extent, a toxic one, the toxin being probably bacterio-genetic."

General Hemochromatosis. Welch (reported in *Boston Med. and Surg. Jour.,* May 25, 1899) read before the Association of American Physicians the report of a case of general hemochromatosis. The patient was a man aged 25 years, who died of typhoid fever. He had a deep bronzing of the skin that was looked upon as the pigmentation of Addison's disease. Autopsy discovered the ordinary lesions of typhoid fever, and in addition a generalized pigmentation of all of the organs. The pancreas and liver were both pigmented and cirrhotic. The adrenals were pigmented, but otherwise normal. Glycosuria was present, but was probably a secondary condition. In the epidermis the pigment was confined to the rete layer; in the corium it was around the blood-vessels and sweat glands. It was

thought that the affection was a morbid entity and that the pigmentation was partly due to destruction of the erythrocytes and also to something in the blood which acted upon the parenchyma of cells and stimulated the deposition of the pigment.

White Nails. Weber and Krieg (*Brit. Jour. of Dermat.,* Mar., 1899) showed at the Dermatological Society of London, a man, aged 52, with white nails or leuconychia totalis. The patient has an old rheumatic valvular affection of the heart, and presents a rheumatic deformity of the small joints of the hands and feet. The finger-nail condition has lasted 4 years. All the nails of both hands are white, and show no lunula. They are rather flat, have longitudinal grooves, and are somewhat thinner than the normal nail. The folds of the skin at the root of the nail are everted, although the patient says he does not peel the skin back from the nails. There is no skin eruption upon the fingers or on any part of the body. A tendency to similar whiteness of the toe-nails can be observed. Unna reported a similar case occurring in a young man in whom the condition had been present from childhood. Giovannini's case was in a man who developed this condition after an attack of typhoid fever at the age of 12. The present case is the 5th one on record, 2 having been observed by Max Joseph.

Treatment of Lupus Erythematosis by Scarification and Pressure Pads. Lawrence (*Intercolon. Med. Jour.,* May 20, 1899) gives histories of 3 cases of ulerythema centrifugum (lupus erythematosis) successfully treated by fine scarification and the application of india-rubber pressure pads. Superficial scarifications numbering 400 to the inch "mince meat" the affected area. Iodoform is then rubbed in, and the rubber pressure pads applied for 4 days. General anesthesia is usually employed. Healing without scar formation or disfigurement is reported. The author has also successfully employed this method in treating keloid.

Toxins in Dermatology. Hallopeau (*Annales de Dermatol. et de Syphilog.,* VIII., p. 854) emphasizes the fact that toxins play a very important part in the production of dermatoses, and he even goes so far as to assert that they are the immediate cause of the great majority of cutaneous diseases. He applies the term toxins to "all morbific substances produced by living organisms," so that stings of insects, jelly-fish, certain vegetable poisons, etc., are regarded as toxins. He explains the pruritus of jaundice, the eruptions and pruritus of diabetes and the eruptions caused by abnormal renal secretions as being due to alteration in the quality of or excessive variation in the quantity of the normal products of secretion. The toxins of microbic origin which are produced in the alimentary canal are a frequent cause of cutaneous diseases. The eruptions which sometimes occur in the course of diphtheria, gonorrhea and the exanthematous eruptions are probably produced by the toxins resulting from the respective micro-organisms. Hallopeau thinks that toxins may be the cause of such diseases as acute eczemas, psoriasis, pemphigus, etc.—*Maryland Med. Jour.*

PEDIATRICS.

UNDER THE CHARGE OF

W. SOLTAU FENWICK, M.D., B.S. (Lond.), M.R.C.P.,
Physician to Out-Patients at the Evelina Hospital for Sick Children, etc.,
AND
JOHN MADISON TAYLOR, M.D.,
Professor of Diseases of Children, Philadelphia Polyclinic, etc.,
ASSISTED BY
JAMES HERBERT McKEE, M.D.,
Instructor in Pediatrics, Philadelphia Polyclinic.

Retropharyngeal Abscess and Retropharyngeal Adenitis. (*Anns. of Gynec. and Ped.*, May, 1899.) The article so titled is from the pen of Johann v. Bokay, of Budapest (translation by Edward M. Plummer), and is a scholarly presentation of this important subject. The author devotes some space to the history of the subject, showing that the affection was known to such celebrities as Hippocrates and Ambrose Parè. The first extensive study, however, was made by C. Fleming (1840). These abscesses are classified by the author as follows: (1) Abscesses called idiopathic. (2) Secondary abscesses due to congestion arising from inflammation of the cervical vertebrae, or from a superficial cervical adenitis. (3) Septic or metastatic abscesses. (4) Abscesses of traumatic origin. In 39 years, the author has seen 614 hospital cases (.2% of the cases seen at the Stefanie-Kinderspital). These figures correspond closely to those of Neumann.

Etiology. The author confines himself chiefly to a consideration of the idiopathic variety. Bokay, Sr., believed that all of these cases originated from retropharyngeal adenitis, though he thought that the term idiopathic might be retained. The author objects to this term, and believes that we should speak of "retropharyngeal abscesses from retropharyngeal adenitis." Most of the cases occur between the second month and the fourth year of life. A causal relationship exists between the affection under consideration and certain constitutional conditions, such as rickets, scrofulosis, etc. In only one case, however, did Bokay observe actual tuberculosis. (This child died of tubercular meningitis.) Syphilis, he observed in 8 cases. The acute infectious maladies are the immediate cause less often than is supposed. (Scarlet fever preceded the abscess 14 times, rubeola once, erysipelas twice and parotitis once.)

Traumatic abscesses result from the deglutition of foreign bodies and are rare. Bacteriologic studies of retropharyngeal abscess have been seldom made. Koplik found streptococci in every case examined; in one instance being associated with the bacillus lactis aerogenes.

Pathologic anatomy. The lymphatic glands initially affected are the "deep lymphatic glands of the face" and the "superior deep lymphatics of the neck." By their afferent vessels these glands (collectively called post-pharyngeal) communicate with the nasal chamber, the bucco-pharyngeal cavity, the ear; in a word, with all the cavities of the cranium. Idiopathic abscesses thus develop in the post-visceral space. When large and deep-

seated, they may push aside the larynx and trachea, or even rupture into the larynx and cause sudden death (Bokay, Sr.). Abscesses from congestion, when left to themselves, may point externally, either in front of or posterior to the sterno-mastoid muscle. When the cervical vertebrae are diseased, pus may burrow into the posterior mediastinum, the previsceral space, the pericardium, or the pleura.

Symptoms and Progress. The so-called idiopathic abscesses may be acute, subacute or chronic. (1) The first symptom, and the one that remains predominant, is *difficulty of deglutition.* This symptom attains its maximum when the abscess is fully formed. The younger the child the more marked is the dysphagia. (2) An equally important symptom is a voice with a nasal intonation and an obscured timber. (3) Respiration is always disturbed and shows the characteristics of stenosis of the upper air passages. (4) The head is held rigid and a little to one side; and a deep-seated ganglionic enlargement is found at level of the angle of the jaw on one or the other side. As the inflammation augments, the submaxillary region grows round and protrudes markedly. (5) Great stress is laid upon the local examination by inspection and palpation; and the author justly extols the latter method of investigation. (6) Fever, mild at the outset, but high when suppuration is established. (7) The pulse is not characteristic. (8) Nervous symptoms are present in isolated cases. Somnolence and eclampsia may appear when circulation and respiration are markedly disturbed. Bokay, Sr., observed 3 cases of facial paralysis following these abscesses. As a rule *secondary abscesses* develop very slowly.

Diagnosis. Careful exploration of the pharynx serves to make the diagnosis.

Prognosis. These abscesses rank among the gravest affections of childhood. The sooner the proper operative treatment is employed, the better will be the prognosis. Tender age, poor nutrition and constitutional disease militate against a favorable result. In secondary abscess the prognosis will depend upon the type of suppuration. The outlook is doubtful in traumatic abscess, and very bad in the case of metastatic abscesses.

Treatment. When the first signs of retropharyngeal adenitis appear, a bladder of ice or cold compresses should be applied to the submaxillary region. If suppuration is inevitable Preissnitz's compresses are used to accelerate the process, so that the abscess may be opened sooner. Whilst admitting the surgical advantages of an external incision, the author thinks that the disadvantages of the oral incision have been exaggerated. [In this view we can scarcely accord. Whenever the services of a surgeon can be procured, it would certainly seem more rational to resort to a method which admits of the modern after treatment of an abscess.]

A Study of Multiple Metastatic Angio-Sarcoma. (Wurdemann, Friend and Black in the *Amer. Jour. of Med. Sc.,* June, 1899.) After dwelling upon the histology of these cases, the authors mention that the characteristic symptoms of orbital tumors are : Exophthalmos, palpation, derangement of vision, pain, loss of motility, pulsation, the consistence of a tumor, and the souffle produced by pressure of

the ophthalmic artery upon the branches of the dilated ophthalmic veins. From their own experience, as well as from an extensive perusal of the literature, they are led to believe that sarcoma of the orbit is necessarily fatal; metastasis sooner or later evidencing itself in the viscera. An interesting case is then reported. The patient, a little girl of 5 years, first displayed a left-sided exophthalmos. A month later Wurdemann found a tumor, and removed the same from the orbital plate. Surrounding tissues were curetted. Two months later the exophthalmos was more marked than at first and the surrounding bony parts were markedly involved. A tumor was also found in the right hypogastric region. The child was markedly cachectic. The tumors were declared inoperable. Two months later she died, and the autopsy and histologic study of the specimen revealed sarcomata, of the nature mentioned, in the brain, bones of the skull and abdomen. The abdominal growth involved the liver, right kidney and gall-bladder. Kidneys, pancreas, mesenteric glands and spleen were infiltrated with nuclear cells. The article concludes with a full bibliography.

THERAPEUTICS.

UNDER THE CHARGE OF
A. D. BLACKADER, M.D.,
Montreal, Canada,
Professor of Pharmacology and Therapeutics, McGill University; Physician to the Montreal General Hospital, etc.,
AND
WILLIAM S. NEWCOMET, M.D.,
Registrar of St. Agnes' Hospital, Philadelphia; Assistant in Medical Dispensary, University Hospital; Chief of Dispensary at Rush Hospital, Philadelphia, etc.

The Application of Caffein in Cardiac and Renal Diseases. Sjenetz (*Vratch,* Vol. XX., No. 14) made some very important observations on the action of caffein. Being at first skeptical as to its harmlessness in the usual doses employed, he finally convinced himself of its decidedly poisonous nature. The three cases reported by him are very instructive: One is that of a young and healthy woman who, feeling indisposed, began to take powders of caffein citrate 0.3 gms. each every 2 hours. After taking 5 powders, she suddenly became unconscious. Subcutaneous injections of ether, blood letting, artificial respiration and other means finally succeeded in reviving her. She soon felt better, and 2 hours later was walking about the room, but unfortunately repeated the powders, and, after the tenth dose, suddenly dropped dead. The heart was firmly contracted, having stopped in systole. In the second case, a young man suffering from pneumonia received 0.2 gm. of caffein citrate three times daily, as a heart tonic. On the third day he suddenly died. The heart was found contracted, almost obliterating the cavities. The third case is that of a middle-aged woman, suffering from an acute exacerbation of chronic renal disease. Caffein was administered to her for its diuretic effect. After taking it for a few days, she died of heart failure. The heart

was also here found very much contracted. The author has administered this alkaloid in doses of 0.2 to 0.3 gm. 2 to 3 times daily in cases of cardio-renal affection and noticed the following results: On the day following the administration the arterial pressure markedly increased, the pulse became full but not changed in frequence, the amount of urine gradually increased, the dropsy diminishing but slightly. In 5 to 6 days the patients began to complain of tightness in the chest, shortness of breath, restlessness at night and general aggravation of the disease. On percussion the heart was found notably smaller. As soon as these symptoms appeared the administration was discontinued, and the blood pressure at once commenced to decline, the excretion of urine decreased, the pulse became soft, the patient feeling much better. The analysis of the urine, however, showed the presence of caffein for many days (10-15), thus proving the cumulative action of the drug. Again, the author has noticed that the elimination of the caffein is much slower when the kidneys are affected, and it is therefore contraindicated in renal affections. A. R.

Medical Treatment of Intestinal Obstruction. Spivak (*Jour. A. M. A.*, May 27, 1899). (1) Every physician should consider his case of obstruction of the intestine, and for that matter, appendicitis, to be one of the 90% that recover without surgical interference, and, therefore, not lose courage; be resourceful and hopeful. (2) Lavage should not be omitted in any case of obstruction. (3) Cathartics should, in all cases of intestinal obstruction, be given a thorough trial, in the form of the infusum sennae compositum. (4) The best diet in cases of intestinal obstruction is absolute abstinence from food and drink. In cases in which the pain is not relieved by lavage, enemas, hot applications, etc., he does not hesitate to give codein hypodermically. [It is also not to be forgotten that the mortality after surgical intervention in cases of intestinal obstruction and appendicitis is largely due to the delay incident to such treatment.—Ed.]

Eight Cases of Toadstool Poisoning. Struble (*Med. News,* May 27, 1899) reports these cases which he has observed very carefully, and compared with the ordinary symptoms usually described in text books. These are generally produced by the amanita muscaria, and, according to Prentis, begin from 15 minutes to 2 hours after ingestion of the fungus: Colic, vomiting, diarrhea, contracted pupil, salivation, profuse sweating, cerebral excitement, disturbed vision, convulsions, slow, thread-like pulse, respirations short and stertorous, death from progressive loss of heart power. This is caused by muscarine; while in the author's cases, the fungus was the amanita phalloides (death cup), which contains, according to Chestnut, a toxalbumen, called phallin, which gives rise to the following symptoms in cases of poisoning: Cramps, convulsions, weak pulse, nausea, vomiting, extreme diarrhea, rice water discharges, death from asthenia. Cramps, probably due to destruction of blood. The symptoms described by the author in his cases, and given in his summary, are: Painless vomiting of a watery mucus, coming on 9 to 18 hours after ingestion, which appeared to be centric on account of the ease with which it is accomplished, and followed, in a few hours, with intense cardiac depression. There were no

cerebral symptoms, nor the sweating and salivation, as occurs in cases of poisoning by muscarine. Case 1. Ate supposed mushrooms at 8 A.M., noon and at 4 P.M.; vomiting commenced at 5 P.M.; died 44 hours after ingestion. Strychnin and atropin had no effect upon the heart. Case 2. Five and one-half months pregnant; ingestion 8, 12 and 4 P.M.; vomiting commenced 15 hours after first meal; died suddenly in 48 hours; no effects from strychnin or atropin. Case 3. Age 6 years, vomiting commenced 17 hours after first meal; died in 48 hours. Case 4. At 8 A.M. ate 4 tablespoonfuls; vomiting commenced 17 hours later; cardiac depression lasted about 4 hours; reacted well to stimulants; recovery. Case 5. Female, 2 years; was given a little of the broth, which she spat out; 18 hours later vomited several times; followed by some diarrhea; recovery. Cases 6, 7, and 8. Ate smaller amounts, and all recovered. He believes that a good effect might be obtained by assisting nature by giving croton oil, salines, or castor oil. Atropin, the antidote which should answer physiologically, does not seem to have any appreciable effect.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE CHARGE OF

W. M. L. COPLIN, M.D.,

Professor of Pathology and Bacteriology in the Jefferson Medical College; Director of the Laboratories of the Jefferson Medical College Hospital; Pathologist to the Philadelphia Hospital; Bacteriologist to the Pennsylvania State Board of Health, etc.,

ASSISTED BY

FREDERICK KALTEYER, M.D.,

Philadelphia.

A Clinical and Bacteriological Study of Diplo-Bacillary Conjunctivitis. Eyre (*Jour. of Path. and Bac.*, May, 1899) records a comprehensive study of the organism described by Morax and Axenfeld, as well as an experimental research into the lesions produced by the germ. The organism known as the bacillus lacunatus is a non-motile, non-flagellate, aerobic bacillus, 2μ in length and 1μ in breadth. In cultures it is pleomorphic, resembling Friedlander's organism. Spore formation has not been observed. Grows best at 37°C., will not grow below 30°C. or above 40°C., thermal death point 56°C. It stains with the usual anilin dyes, but requires rather prolonged staining. *Bleu de Roux* is recommended as the best staining agent. The organism shows peculiar reaction to Gram's method, retaining only a small amount of the characteristic Gram stain in some specimens; under most circumstances it is decolorized. It refuses to grow in the absence of serum in some form. Serum broth, serum agar, blood serum, ovarian cyst fluid, etc., may be taken as types of media upon which the organism will grow. On blood serum, streak cultures, there develops, after 18 hours' incubation, a moist, shining line which later is replaced by a shallow furrow. At first this furrow extends in depth only, but

later laterally, and in a week or more completes the liquefaction of the medium. In smear cultures on serum the isolated colonies appear in 24 hours as moist, circular depressions or pits, which gradually enlarge during the following 24 hours, rarely reaching a diameter of 3 mm. If the colonies are sufficiently close together, they coalesce, and liquefaction continues; in the abscence of coalescence it may be arrested. There is an early and marked appearance of involution forms, the typic diplo-bacillus is rare, being replaced by organisms resembling diplococci, fine-pointed spindles, and long, thick, straight or curved rods. The diplo-bacillary character of the organism may be re-established by cultivation in serum broth. So far as the experimenter can determine, the organism is not pathogenic in any animal except man. Accidental and intentional inoculations in man are followed by typic lesions. With regard to the clinical features of the disease, Eyre records the following: Of 3,000 consecutive cases at Guy's Hospital, 2.5 % show diplo-bacillary conjunctivitis. Since 1896 over 200 cases have been examined. Neither sex nor age is an important factor. The affection is contagious, though not highly so. There is no definite relation to any particular season. With regard to the symptoms, the element of chronicity is most striking, the duration of the condition being from a few weeks to 10 months. There are few subjective symptoms—stickiness of the lid: adhesion in the morning; scanty, whitish discharge at intervals; slight photophobia; inability to work long by artificial light, and, late in the day, slight irritation and smarting of the eyes, and in some cases watering. One eye is usually affected first, the second becoming involved about a week later. Examination shows mucus-like discharge and concretions which adhere to the roots of the lashes and margins of the lids and inner canthus. The palpebral conjunctiva, particularly on the lower lid, is of a deep red color; the bulbar conjunctiva is slightly involved; caruncle deep red. Stained films made from the discharge show bacilli, some polynuclear leucocytes and squamous epithelial cells and a few fibrin threads. A few bacilli may be found within the leucocytes. With regard to the treatment Morax is quoted as stating that "a 1 in 40 solution of zinc sulphate, used every 4 hours, is specific." Axenfeld uses a 1% solution of the same salt. Eyre recommends a lotion containing chlorid of zinc ½ gr., bichlorid of mercury ⅛ gr, distilled water 1 oz., applied every two hours; 3 times a day the lids are anointed with vaselin containing 1 gr. of iodoform to the ounce.

Cycling During Pregnancy. Lucas Championnière is quoted (*Practicioner,* June, 1899) as favoring the use of the wheel during pregnancy. Its proper use produces an immediate favorable effect upon the respiration and circulation, while indirectly it acts advantageously upon the gastro-intestinal functions. The bicycle should not be ridden when fatigued or at the time of the menstrual periods. Riding to the point of fatigue, hill climbing and long distance riding are, of course, to be avoided, abortion or miscarriage having followed the neglect of these precautions.

CLIMATOLOGY AND HYGIENE.

UNDER THE CHARGE OF

S. E. SOLLY, M.D., M.R.C.S.,

Colorado Springs, Colo.,

GUY HINSDALE, M.D.,

Philadelphia,

Member of the American Climatological Association; Fellow of the American Neurological Association, etc.,

AND

A. ROBIN, M.D.,

Pathologist and Bacteriologist to the Delaware State Board of Health,

Newark, Del.

Diet in Tuberculosis. Stubbert (*Trans. of N. Y. Co. Med. Soc.*, 1899) said that it is a difficult thing to persuade many a patient with incipient tuberculosis that he must not, of necessity, stuff his stomach with concentrated nourishment from 4 to 6 times daily. In advanced cases at all times, and in a very few incipient cases when they first come under observation, specially arranged diets are necessary. In 90% of incipient cases nothing is better than 3 substantial meals a day. The appetite of convalescing tubercular patients is something extraordinary. Climate, out-of-door life, and tonic treatment, all tend to increase the powers of digestion: nevertheless, in most cases, periodically there will arise disorders from overfeeding, which will require treatment. Nothing is more simple to overcome than those so-called bilious attacks, and after a rest of a few hours the patient will resume with avidity and benefit his process of stuffing. However, we know what a large percentage of tuberculosis is due, primarily, to lack of assimilation, and it is not strange that we find quite a percentage of patients with chronic gastritis and dilated stomachs. Most cases of this nature can be relieved by siphon irrigation of the stomach 3 times a week, and if dilatation be present Einhorn's electrode may be introduced, and faradization practiced. This is another auxiliary treatment, not only necessary, but imperatively demanded; surprisingly brilliant results generally follow, not only as to digestion, but indirectly affecting the tubercular disease.

Poison in Our Food. "*The Nation*," May 25, 1899, says: "In Pennsylvania, the Food and Dairy Commissioner, Levi Wells, has ascertained that chemical companies have had agents travelling regularly in the State to sell to butchers chemicals for preserving meats, the favorite being apparently boracic acid, which 'is certainly deleterious to health.' The packages are labelled, telling how the chemicals are to be used on meat. In Connecticut the Agricultural Experiment Station issued on May 1st its annual report on the adulteration of foods. It gives a summary of the extent to which frauds are practiced on consumers, thanks to Yankee ingenuity, combined with modern advances in chemistry. Of 63 samples of fruit jellies, two-thirds were adulterated, not

only with starch and glucose, but with anilin dye and poisonous salicylic acid. Out of 40 samples of marmalades and jams only 3 were pure. Of 47 samples of beer and ale, 12 contained salicylic acid, and 19 samples of sausages and oysters were found 'embalmed' by boric acid."

The Dynamic Theory and its Application to Medicine and Hygiene. Skwortzow (*Bolnits. Gaz. Bot.*, Vol. X., No. 4) read a very interesting paper before the First Russian Convention of Climatologists, Hydrologists, and Balneologists, in which he explained his original theory of electrogenesis of force. According to his views, it is not heat that the earth receives from the sun, but magneto-electric induction, which destroys the equilibrium of energy at different points of the globe, sending currents of energy from one place to another. The temperature of the atmosphere is dependent on the magnetism and electricity; these latter also setting in motion all the physical and chemical forces of the globe, being, in turn, regenerated and kept up by these forces. It is these electric currents which penetrate the earth and the atmosphere, imparting to the air, water, soil, and, in general, everything on the face of the globe, special properties which may be called "dynamic." The influence on the organism in health and disease of pure air, mineral waters and plants depends largely on this electric dynamization, the indicator of which is ozone. In employing baths impregnated with metals it is therefore necessary to have the baths insulated, so that the electricity will not pass into the ground.

The Sick-room. Eberson (*Zeitschr. f. Krankenpfl.*, Feb., 1899; *Bolnits. Gaz. Bot.*, Vol X., No. 11) points out the important role played by the sick-room in the course and issue of a disease. The room, he says, should be the largest and brightest in the house, and one situated either south or east, looking into the yard, so as to be excluded as much as possible from the noises of the street. It should be occupied only by the patient, and no others should be allowed to sleep or work in it. The furniture should consist, if possible, of 2 beds for the patient (one for constant occupation, the other for removing the patient when his bed is made). The bed should be placed at a distance from the wall; a couch for the nurse, a small table or chest, a larger table, an easy chair, and several other chairs. Of utensils, one medicine glass, a bottle for water, a small and large spoon, a glass spittoon, a bed pan, and pen, ink and paper. All other useless furniture—as carpets, curtains, etc.—should be removed from the room. During the winter, sufficient ventilation is accomplished by the open fireplaces. During the summer, however, the room can be ventilated either indirectly or directly. To use the first method, the windows in the adjoining room are opened for 2 hours, while the doors leading to the sick-room are closed, to be widely opened at the expiration of the 2 hours. The second method is to be employed only when it is warm outside. In this case, the upper part of one window is lowered and the lower part of the other raised, so as to prevent a draught. Ventilation should be done 3 to 4 times during the day and 1 to 2 times at night. The bed should also be well ventilated, during which process the patient is removed to the other bed. At the same time, the room is dusted by means of a wet rag moistened in carbolized water, and sprayed

with turpentine or oil of pine. The clothes of the patient should consist of a linen night shirt. The cover should be either of wool or lined with cotton and protected by a linen sheet. The toilet of the patient should comprise washing of the face and hands with warm water, to which cologne is added. The mouth is washed with a weak solution of salt, and in fever-cases the lips moistened with almond oil. In prolonged cases, especially in the old, the back and spine should be washed with aromatic alcohol. The bed clothes, as well as the patient's shirt, should be changed daily. The illumination of the room should meet the indications present. It should be bright in cases of depression, somnolence, stupor, morphin poisoning, pulmonary tuberculosis and bronchial or cardiac asthma. This kind of illumination is contraindicated in infectious diseases associated with fever, insomnia, irritation or disease of the brain, nerves or heart, apoplexy, migrain, and some inflammatory diseases of the eye. A dim light which can be produced by either dark curtains or painting the window panes with chalk, is indicated whenever a quieting and hypnotic effect is desired. In some cases of extreme excitability of the nervous system, insomnia or diseases of the eye (retinitis, iritis, etc.), the room should be dark. A red illumination is indicated in small-pox. The room temperature should always correspond to the condition of the patient, lower in cases of fever and higher in cases of anemia or disease of the bronchi and lungs. Wood is the preferred material for heating. The nursing should preferably be done by women having some training. Members of the family are objectionable as nurses.

SURGERY.

UNDER THE CHARGE OF

JOHN A. WYETH, M.D.,

Professor of General Surgery in, and President of the Faculty of, the New York Polyclinic Medical School and Hospital,

CHARLES L. LEONARD, A.M., M.D.,

Instructor in Clinical Surgery in the University of Pennsylvania; Skiagrapher to the University Hospital; Surgeon to the Southern Dispensary,

AND

W. WAYNE BABCOCK, M.D.,

Demonstrator of Pathology and Bacteriology in the Medico-Chirurgical College of Philadelphia; Pathologist to the Kensington Hospital for Women.

Death from Dry Cupping. Parkinson (*Indian Med. Rec.*, May 31, 1899) narrates the unusual case of a Brahmin woman who, with the evident intent of causing abortion, used a primitive method of dry cupping the abdomen, and died from the ensuing infection and necrosis. The woman had placed a thin cake of mud over the abdomen to protect it from the heat, upon this a small mustard oil lamp, and had inverted over this a brass vessel with a neck 4 inches in diameter. Nearly 4 days later, the natives having meanwhile succeeded in removing only the base of the vessel, the patient reached the hospital and the abdominal wall was liberated, exposing a circular gangrenous patch, a foot in diameter. The sloughing

which ensued opened the abdominal cavity in a number of places and the patient finally died with tetanic symptoms. Attention is called to the unusual method of criminal abortion, as well as to the great destruction produced by a usually simple and safe procedure.

The Radical Cure of Reducible Hernia by Kocher's Method of Invagination, with Lateral Displacement of the Neck of the Sac. Thomas (*Bristol Medico. Chirur. Jour.*, Dec., 1898) describes Kocher's latest modification of his method, which the author has employed with success in a number of instances. Without describing the method in detail, he points out the modification, which consists in carrying the invaginated hernial sac with Kocher's forceps well within the abdominal cavity to a point nearly parallel with the ant-sup-iliac spine. The abdominal muscles are incised upon the end of the forceps, the sac is drawn out, its excess cut off and the end sutured in the wound, which is closed. The other steps of the operation are identical with former operations. The difference is only that the sac is displaced within, instead of outside of the abdominal wall. In one case operated on by this method, the patient walked a quarter of a mile on the sixteenth day without a truss, with no effect whatever on the scar. Provided the patient has no cough and the case has run an aseptic course, he sees no objection in letting the patient up as soon as the skin sutures are removed. The scrotum should never be incised in a hernial operation: if there are adhesions, the testicle, etc., should be displaced upwards. The author finds the employment of sterile thread gloves facilitates these operations and prevents slipping, while they add to the chances of asepsis.

The Operative Treatment of Varicose Veins of the Leg. Martin (*Therap. Gaz.*, Feb. 15, 1899) discusses the various operations that have been performed for this condition, and gives the results which he has obtained by various methods. These results lead him to say: "I believe that all 3 of the methods at present in vogue have their proper application. Where the varix is moderate in degree, even though extensive, and where the vein is dilated high up, the high division between ligatures, performed under cocain, should be given a trial. Should this fail, and should the vein be moderately dilated, either multiple ligations or multiple small excisions would be indicated. When the veins are enormously distended and tortuous, and particularly when they contain sacculations and thrombi, total excision is indicated. All of these methods of treatment should be supplemented by rest in bed for 2 weeks, with careful splinting, and by wearing a carefully applied bandage for at least a month. Operative dangers and complications are no longer to be feared."

The Advisability of Bone Suturing in Treatment of Fractures. Nelson (*The Charlotte Med. Jour.*, Feb., 1899) says that the best mechanical appliances known not infrequently fail of accomplishing the highest results, even in the hands of those who devised them. There are yet some cases of fracture where deformity will persist even in the hands of the most skillful. Simple fractures of the leg or forearm will, with the most primitive treatment, yield good results, provided the joints are not involved; but

badly comminuted fractures, even in good localities, so to speak, frequently give untold trouble and the physician has often been mortified by his results, although the work has been carefully and thoroughly done. No method can produce perfect results in all fractures. The most unlearned must see that a certain class of fractures, if cured at all, can only be, at the expense of changed shape and impaired usefulness. The author makes "the *broad statement*" "that fractures take place in many portions of the skeleton and under many conditions, intrinsic or extrinsic, in which satisfactory results, without or with minimized deformity, are only attainable by suturing together the several fragments." "Also, that in many cases such procedure, instituted immediately after the accident, should be done as a routine method, both in order to save the patient valuable time as well as to lessen the fatigue and suffering incident to other methods of treatment." The author does not claim originality for this method of treatment, but details a series of cases where he has proved its value, and gives the following summary of the cases where such treatment is indicated: (1) All fractures where vicious union produces serious deformity or impairment of function, no matter how long the duration—provided the grounds upon which we act be reasonable. That is, where there is deformity or loss of function that can be corrected. (2) All fractures where ligamentous union exists demand this treatment to secure, either in whole or part, perfect performance of function. Where such faulty union is caused by intrinsic disease, as syphilis or alchoholism, the chances of success are lessened. (3) All recent forms of fracture, where muscular action renders difficult the maintenance of several fragments in opposition, no matter whether said fractures be simple or compound. All fractures involving the joints, particularly if there be comminution of the fragments entering into the composition of the joint. Of course, under all circumstances, the age, physical condition, etc., of the patient must be duly considered.

LARYNGOLOGY AND RHINOLOGY.

UNDER THE CHARGE OF

D. BRADEN KYLE, M.D.,

Clinical Professor of Laryngology and Rhinology in the Jefferson Medical College, Philadelphia; Consulting Laryngologist, Rhinologist and Otologist to St. Agnes' Hospital, etc.,

AND

W. H. KING, M.D.,

Assistant Otologist, Pennsylvania Hospital, Out-patient Department, and Associate in the Throat and Nose Department of the Jefferson Medical College Hospital, Philadelphia.

Zur Technick der Operation—Und Der Peritonsillaren Abscesses der Gaumen-Mandeln (Operative Technique for Peritonsillar Abscess). E. Brieg (*Deuts. Med. Wochens,* No. 14, 1899) for peritonsillar abscess proceeds as follows: After making sure, with an aspirating syringe, of the exact locality of the pus, a superficial incision is made, into which a hemostatic forceps is inserted, and forced deeper and deeper with

a rotary movement, at the same time separating the blades. In this way a large exit is made for the pus; one that closes more slowly than an incision, with the advantage, too, of avoiding hemorrhage, usually more or less abundant. (Abs. by Jankelevitch in *Rev. Hebdom. de Laryn.,* No. 23, 1899.)

Traitement de la Dysphagie dans les Laryngites Tuberculeuses par un Produit de Culture Microbien (Treatment of the Dysphagia of Tubercular Laryngitis by the Product of the Microbic Culture). M. Lavrand proposes to employ in the intense dysphagia of tuberculosis the microbic product extracted from the bacillus of Koch, which in the hands of Bourgeois has given excellent results in the treatment of early pulmonary tuberculosis. It can, in reality, render service in advanced cases of the disease. It is absolutely harmless, and will augment the strength of the patients. It lessens the dysphagia in tubercular laryngitis as well as pain when met in these cases. It exercises a favorable action on the laryngeal lesions, although far advanced, and gives results in those cases when ordinary means have failed. Four cases are cited proving these assertions. (Abs., *Rev. Hebdom. de Laryn.,* No. 21, 1899.)

Un cas D'Argyrie de la Peau et de Muqueses Consecutive a des Cauterisations Repetees de L'Arriere-Gorge par le Nitrate D'Argent (A Case of Argyria of the Skin and Mucous Membrane Following Repeated Cauterization of the Oropharynx with Nitrate of Silver). Meneau (*Archiv. Internat. de Laryngol.,* No. 1, 1899) has seen a patient of 73 years, whose throat had been cauterized more than a thousand times. The case had argeria of the skin of the forehead, which was clearly slate color; and of the chest, which was of a slightly paler tint. The buccal and pharyngeal mucosa were of a grayish shade. A mucous polyp of the left nasal fossa contained black granulations in the interior, of which examination disclosed the presence of traces of silver. (Abs., in *Rev. Hebdom. de Laryn.,* No. 21, 1899.)

Urticaire et Odeurs (Urticaria and Odors). Joal, who has made some study of reflex disorders occasioned by odors in persons predisposed, reports 3 observations where urticaria has developed under the influence of odorous emanations. The first was one in which the urticaria had been preceded by spasmodic sneezing, rhinorrhea, headache, vertigo and syncope, and was due to the preparation of aromatic coloring essences. The urticaria could be reproduced artificially. He added that in 2 other cases, one in which the urticaria was associated with asthma and hay fever, it has been provoked by iodoform, sulphid of carbon, rose, lilac and hyacinth. The author reports also some similar cases, and likens olfactory urticaria to nasal urticaria, of which it is merely a variety. He also calls to mind that Gueneau de Mussy considered hay fever and ordinary asthma as "internal urticarias." He thinks, also, that these two classes of phenomena are of a vasomotor nature, and have the same origin—either a nasal irritation or an olfactory impression. (Abs., in *Rev. Hebdom. de Laryn.,* No. 21, 1899.)

OPHTHALMOLOGY.

UNDER THE CHARGE OF

WALTER L. PYLE, A.M., M.D.,

Assistant Surgeon to Wills Eye Hospital, Philadelphia.

The Giant Haab Magnet in Removal of Foreign Bodies from the Eye. Fisher (*Jour. of the Am. Med. Assoc.*, May 20, 1899) discusses the relative merits of the small magnet and the large Haab magnet, and describes the technique of this latter instrument. The patient is placed in a comfortable position, in an operating chair or on an operating table, in such manner that the tip of the magnet will be in the line along which the foreign body is to be extracted. The patient and magnet are placed in position, then the tip of the magnet is touched to the cocainized eye before using any electricity. If the metal has entered the eye back of the lens, the opening should be enlarged, if possible, and the oval tip of the magnet placed into the opening and the current gradually turned on. If successful, the metal adheres to the magnet. If there is failure the first time, the current may be turned off, and quickly turned on and off, and in this way the metal may be dislodged. If the original opening cannot be found, there is no objection to making an opening in the sclera back of the lens. If the metal is removed successfully in this manner, there is more liability to injury of the vitreous than there would be if a small magnet was introduced into the vitreous several times. If the foreign body is removed in this manner, the vitreous is not churned up, but a tract made in its entrance and another in its exit. There is certainly no objection to using the Haab magnet for diagnostic purposes, providing we are prepared to remove the foreign body, if we find one. If we suspect a foreign body in the eye and the lens is clear, we would not think of applying the tip of the magnet to the cornea, for we might injure a sound lens. If we have a clear lens we apply the tip of the magnet to the sclera behind the ciliary body. If we dislodge the metal we find the sclera adhering to the magnet. In such a case, make an opening in the sclera, and extract the foreign body. If the lens is opaque, there seems to be no objection to using the magnet for diagnosis, and placing the magnet in contact with the cornea. If no metal be found, no harm can come from the use of the magnet. In such cases dilate the pupil and cocainize the eye, place the tip of the magnet in contact with the cornea at the sclero-corneal junction, then gradually move the rheostat till the iris bulges forward. Now turn off the current, and place the tip of the magnet in position to draw the metal through the pupil into the anterior chamber. When the metal is in the anterior chamber the operation is a simple one. Make an incision over the foreign body with a Graefe knife or a keratome, and extract with a small magnet. In operating with the giant magnet we should have a non-magnetic eye speculum and fixation forceps. If we operate through the sclera, we should have two non-magnetic retractors to hold the wound in the conjunctiva open. Choice of anesthetics must be left to the behavior of the patient. Cocain will be sufficient

in most cases. All magnets of this kind should have a rheostat, and the magnet should touch the eye before applying any electricity. The rheostat should always be moved slowly, in order not to use any more force than is necessary.

GENITO-URINARY SURGERY AND VENEREAL DISEASES.

UNDER THE CHARGE OF

J. D. THOMAS, M.D.,

Professor Genito-Urinary Diseases, Western Pennsylvania Medical College (Medical Department Western University, Pittsburg); Genito-Urinary Surgeon to the South Side Hospital; Ex-Vice-President American Medical Association, etc.,

AND

H. M. CHRISTIAN, M.D.,

Surgeon in charge, Genito-Urinary Dispensary, University Hospital; Adjunct Professor Genito-Urinary Diseases, Philadelphia Polyclinic, etc.

Treatment of Prostatic Hypertrophy. Ramon Guiteras, in a paper entitled "Some Illustrations on the Bottini Operation" (*Jour. A. M. A.*, July 1, 1899), concludes that castration, vasectomy and iliac ligation are of very little benefit in prostatic hypertrophy. The choice of operative procedure lies between prostatectomy and the Bottini operation, the latter probably having only one-half or one-third the mortality of the former. The cases best adapted for enucleation are the large, so-called glandular hypertrophies, where the prostate is felt, through the rectum, as a rather large tumor, and where the urethra is much elongated and distorted by the hypertrophy. The cases for the Bottini operation are those without marked hypertrophy, but with induration and middle lobe impediment. In these cases enucleation may not be possible; while the Bottini procedure will also benefit any case of the large variety. Indications for this latter method are: A nearly complete retention of urine, marked vesical tenesmus and vesical irritation not relieved by catheterization and vesical irrigation, marked cystitis or hematuria, and an increasing amount of residual urine. Marked arterio-sclerosis and grave renal or cardiac disease are contra-indications. Nitrous oxid gas has been successfully used as the anesthetic. With the Bottini instrument three incisions are usual: (1) A posterior incision 3 cm. long; (2) two lateral incisions 2.5 long. With irregular enlargement, affecting principally the middle lobe, the second incision should be anterior and 2 cm. long, and the third through the larger of the lateral lobes. A current of 45 to 50 amperes applied 80 to 90 seconds is usually required. The after treatment includes rest, diluents, urinary antiseptics, and, if necessary, antispasmodics and the insertion of a catheter which is permitted to remain 24 to 48 hours.

Protargol in Gonorrhea. Colombini (*Brit. Med. Jour.*) keeps at hand a 10% solution which he prepares by pouring 5 c.cm. of neutral glycerin into a small mortar, and adding to it 10 gms. of protargol, stirring up the mixture with a glass rod till a thoroughly homogeneous moist paste

is produced. This is next diluted with 95 c.cm. of cold sterilized water, and shaken up till a perfect solution is produced; this solution is kept in a colored bottle in a dark place. As required, a 0.25% solution is made by mixing 2½ c.cm. of the standardized solution with 97½ c.cm. of sterilized water; a 0.50% solution by mixing 5 c.cm. with 95 c.cm. of water; a 1% by mixing 10 c.cm., and a 2% by mixing 20 c.cm. of the standardized solution with 90 and 80 c.cm. respectively of sterilized water. These solutions he uses as urethral injections according to the stage of the disease. In the acute stage he uses the 0.25% solution. After making the patient pass water, and washing the glans and prepuce with some antiseptic solution, he first injects a syringeful of protargol in such a way that sufficient room is left for the outflow of the injection; then refilling the syringe (which is made to hold 6 c.cm) to two-thirds of its capacity, he injects the solution very slowly, blocking the meatus completely, so that it may not run out again. The syringe is carefully removed, the patient being directed to keep the meatus closed with his fingers for 15 minutes, and not to pass water for an hour. As the inflammation subsides, the strength is gradually increased up to 2%. The solution is injected at the temperature of the air. The first day one injection is given, the next one in the morning, and another in the evening; the third and following days one in the middle of the day as well. The injections are continued for 20 days after the cessation of the discharge, the daily number being gradually diminished to one. Colombini gives details of 21 cases, and sums up that the results were excellent in every respect. The gonococcus quickly disappeared, the subjective phenomena speedily ceased, the discharge was rapidly diminished and modified, and complete recovery occurred without any complication. According to him, it realizes the ideal of a remedy for gonorrhea, curing the disease rapidly and effectually, without the least irritation or undesirable after-effect on the mucous membrane.

GYNECOLOGY.

UNDER THE CHARGE OF

EDWARD E. MONTGOMERY, M.D.,

Professor of Gynecology, Jefferson Medical College; Gynecologist to Jefferson and St. Joseph's Hospitals, etc.,

AND

WILMER KRUSEN, M.D.,

Instructor in Gynecology, Jefferson Medical College; Assistant Gynecologist, St. Joseph's Hospital; Gynecologist, Charity Hospital of Philadelphia, and Chief of Dispensary for Diseases of Women, St. Joseph's Hospital.

Bromid of Ethyl in Gynecology and Obstetrics. Hammond (*Amer. Gyn. and Obstet. Jour.*, Mar., 1899) advocates the more general employment of ethyl bromid where pelvic examination under an anesthetic is indicated. He considers it the ideal anesthetic for this purpose. It requires but a very small amount; the return to consciousness is rapid and the post-anesthetic effects are practically *nil*. The employment of a pure drug must be insisted upon. In administration a towel is used, a dram of the

drug is placed thereon, and the towel applied over the nose and mouth, holding the edge snugly to the face and adding small amounts until narcosis is complete. Should rigidity intervene do not push the anesthetic, but withdraw until relaxation occurs. Its employment is advised in the following conditions: "(1) Gynecological examinations; in incising abscesses in the abdominal wall; in making vaginal puncture for the removal of pelvic accumulations; for the removal of stitches (when a narcotic is indicated); for incising a vulvo-vaginal abscess, or any like procedure of short duration, say 10 to 15 minutes. (2) In obstetrics—during parturition: for performing version, forceps application, or any obstetrical operation of brief duration. Ethyl bromid has a distinct field, and is preferable when so employed to either ether, chloroform or their combinations."

Epithelioma of the Vulva. Duret (*Jour. des Sc. Med. de Lille,* Mar. 25, 1899) discusses the origin and treatment of epithelioma of the vulva. He says it may begin in the clitoris, or in the anterior portion of the urethra, or it may attack primarily the labia minora. In the latter case it originates as a hard, ulcerated, and fungous plate between the labia minora and majora, extends to the vestibule and destroys the vulva and urethra. When it shows itself first in the region of the urethra, it forms around its external orifice a hard, vegetating ulcer, giving the finger the sensation of a tube of pasteboard; soon, with the near tissues, it becomes soldered, as it were, to the adjacent bony walls. When the epithelioma starts upon the clitoris, forming there a mass, it soon spreads to the anterior portion of the vulva toward the mons veneris, and is accompanied by sharp pains, radiating through all the pelvis. Inquiring into the cause of this disease, Duret claims that this form of cancer is often preceded either by kraurosis or leucoplakia of the vulva. Kraurosis of the vulva is a singular malady, leading to a general shrinkage of all parts of the external genitalia. In vulvar leucoplakia, whitened plates appear upon the labia, the vaginal walls, the neck of the uterus, and the interior of the urethra, being peculiar to the mucous membrane. At first opalescent and scattered, these may increase until they entirely cover the vulva and vagina, and, gradually thickening, seem in places like a porcelain covering of the vulva. There is an excessive keratinization of the epidermis in certain areas, in which, in fact, originates the transformation into epithelioma. These whitened, horny plates may remain without transformation 10 or 15 months, or even longer. This change has been averted by the breaking up of their surface, producing fine scales which detach themselves, and by the formation of branching fissures. In regard to the diagnosis of epithelioma it is liable to be confounded (1) with simple vegetations, (2) with lupus of the vulva, and (3) with syphilitic affections; but the first, the simple vegetations, secrete a virulent liquid unlike the ichor of a cancer, they readily yield to an energetic caustic which prevents their reproduction, and they have no hardened base, being remarkable for their softness. In the case of lupus the vulva is red and presents scattered fungous ulcerations which are without any indurated base; while the syphilitic chancre is more limited and has a little circle of characteristic induration. In treating epithelioma of the vulva, one can em-

ploy either the thermo-cautery or the bistoury. He thinks the former should be used only in desperate cases, where the lesions are far advanced, and it has the disadvantage of leaving a gaping wound. Ablation by the bistoury ought to be preferred in almost all cases, and in this operation all the tissues should be removed to the bone. When the epithelioma is limited to the clitoris or the labia minora, this intervention is not difficult; but in case of urethral epithelioma the surgeon ought to make the excision large and leave only the neck of the bladder toward the pubis, and fasten it by sutures of silk near the base of the clitoris. It is then easy to suture the mucous membrane of the vestibule to the neck of the bladder and thus reconstitute a true canal, a little short, it is true. Thus even an extended vulvar epithelioma is sometimes susceptible of a satisfactory reparation.

OBSTETRICS.

UNDER THE CHARGE OF

EDWARD A. AYERS, M.D.,

Professor of Obstetrics, New York Polyclinic, and Attending Physician to the Mothers' and Babies' Hospital,

ASSISTED BY

GEORGE GRAY WARD, Jr., M.D.,

Adjunct Professor of Gynecology, New York Post-Graduate Medical School; Instructor in Obstetrics, Cornell University Medical College and Long Island College Hospital; Assistant Attending Physician Mothers' and Babies' Hospital, New York.

Retention of Urine. Herrgott (*Ann. de Gyn. et d'Obstet.*, Apr., 1899) reports a very unusual case of retention during pregnancy. A 3-months' uterus compressed the rectum to such an extent as to cause a large accumulation of feces, which in time forced the uterus against the bladder, preventing its evacuation. Four and one-half liters of urine were drawn off, and enemata caused the evacuation of 8 chambers of fecal matter.

Radiography in Pregnancy. Varnier (*Ann. de Gyn. et d'Obstet.*, Apr., 1899) reports his experiments on a number of living women and cadavers with the X-ray, to determine the presentation position and posture of the fetus. This he accomplishes satisfactorily, after 6½ months' gestation. The fetal spine and extremities remain invisible, however. He first obtained a satisfactory contour of the fetal skull on February 13, 1899.

Rupture of Vagina During Labor. Horn (*Münch. Med. Woch.*, No. 18) describes a remarkable case of rupture of the vagina, separating it from the uterus, so that the hand could be easily passed into the abdominal cavity. The woman had a flat, rachitic pelvis and, after repeated attempts to deliver with the forceps, she was brought to the hospital in a

state of collapse. Craniotomy was performed, and, as the condition of the woman did not permit of coeliotomy, the tear was partially sutured and a gauze drain introduced. The patient recovered and left the hospital in 4 weeks.

Inversion of the Uterus. Braun-Fernwald (*Wien. Klin. Woch.*, No. 16) reports a case in a 2-para following a twin birth. The placentae were delivered spontaneously, and there was no traction on the cord. There was severe hemorrhage, and the protruding mass was easily replaced. The patient recovered.

Can Ergot Cause Rupture of the Uterus? Bong (*Monats. für Geburts, a Gynak.*, June, 1899) reports a case of rupture following the administration of 4 gms. of ergot by a midwife. The patient suffered from collapse, and a tear was found in the right side of the uterus. The delivery was by version. The author believes that tetanus uteri was produced by the ergot and the rupture then occurred at the point of least resistance. The autopsy showed that the abdomen was full of blood.

Permanent Separation of the Amnion and Chorion at Term. Nichol (*Med. News*, July 1, 1899) reports a case in which the fetus was enveloped in 2 sacs instead of 1, the amnion and chorion having failed to unite, as they should do at the third month. The microscope confirmed the nature of the sacs. Two bags of water thus existed. Seven other cases have been reported.

Accidental Separation of the Symphysis Pubis During Labor. Rutherford (*Louisville Jour. of Surg. and Med.*, June, 1899) describes such a case as follows: 4-para, 28 years old, the first child was a monstrosity, and was delivered with forceps at the sixth month. The second weighed 5½ pounds, delivered with forceps. With the third a craniotomy was necessary after unsuccessful attempts with the forceps. In the fourth labor, forceps were applied, with the hope of escaping a craniotomy. Traction was kept up at intervals for an hour, when, under strong traction, something was felt to give way. The forceps were removed and the child was born without assistance. Examination showed a separation of the symphysis pubis. Recovery followed an ensuing septicemia.

Notes on the Induction of Premature Labor. Coe (*Med. Rec.*, July 8, 1899) states that, while the gauze tamponade and water bags are invaluable for the purpose of softening and dilating the cervix and lower uterine segment, they cannot be depended upon to excite regular uterine contractions, provided that the membranes are intact. He cites several cases in point. He believes their use, however, should precede manual dilatation, and that prompt delivery should be done after full dilatation has been secured, rather than to let the woman suffer for a long period waiting for labor to begin. It is not necessary to anesthetize the patient to introduce the gauze or bags, in his experience.

INTERNATIONAL MEDICAL MAGAZINE.

A Monthly Journal of Medical and Surgical Science.

AUGUST, 1899.

Edited by BOARDMAN REED, M.D.

PUBLISHED MONTHLY BY E. B. TREAT & CO., 241–243 WEST 23D STREET, NEW YORK.

"Gynecology has evolved rapidly" are the opening words of a communication in which Dr. E. C. Coleman, himself an attending gynecologist to several hospitals, mildly criticises, in the *New York Medical Journal,* an extraordinary series of papers which have recently appeared from the pen of Edebohls of that city. The latter eminent gynecologic authority, whose surgical skill is beyond question, has devised some new methods of operating upon diseased appendices and loose or floating kidneys and discusses them from the standpoint of the gynecologist with a refreshing boldness and originality. Indeed, if Edebohl's teachings are to be accepted, gynecology has not only evolved but revolved, for his claims are somewhat revolutionary. The special field of the gynecologist has always been supposed to be the diseases peculiar to women, but appendicitis and floating kidneys are common to both sexes, though the latter are found more frequently in women. In view of the frequent failure of clinicians generally to diagnosticate the condition known as movable kidney, we are inclined to concede much credit to the gynecologists for the prominent part which they have played in popularizing in the medical profession a knowledge of this abnormality, as well as the ingenuity and skill they have displayed in overcoming it by surgical methods. But it must not be supposed either that they were the original discoverers of the affection or that the surgical procedures for remedying it, which their extraordinary energy and activity are helping them to monopolize, are the only promising methods for combating it.

The Treatment of Movable Kidneys.

Fourteen years ago the writer and Dr. John K. Mitchell, of Philadelphia, were members of a class of physicians who were studying abdominal diseases in Vienna under Oser, then and now a celebrated stomach specialist. A prominent feature of Oser's course then was a painstaking demonstration of how to recognize floating kidneys. And the subject was by no means new at that time. As to the treatment of the condition, it ought by no means to become accepted as orthodox doctrine that loose or floating kidneys necessarily demand operative measures. Indeed, the surgeons and gynecologists, including Edebohls himself, admit that, while one-fifth of all

women have movable kidneys, in only one-fifth of such cases are there any symptoms resulting, and that the only ones requiring an operation are those which produce symptoms.

Now, it is a fact that by judicious medical treatment, including for some cases a period of rest in bed with well-fitting abdominal belts, for all cases at some stage abdominal massage, special gymnastic exercises, appropriate diet, invigorating hydriatic procedures and, for most cases, faradic electricity, locally applied, along with intragastric applications of the same for the concomitant gastric displacements and dilatations, a considerable proportion of the cases of movable kidney can be wholly cured, the wandering organs resuming their normal positions and, as the natural fatty cushions are restored, retaining them. And by the same means, in practically all the cases, the symptoms can be removed, and thus, according to the admissions of our surgical friends themselves, all excuse for operative intervention may be obviated.

Hyperpyrexia and Consciousness.

There is a growing appreciation of the fact that many of the ill effects that have been ascribed to hyperpyrexia alone are due chiefly to an associated toxemia. We are beginning to realize that not only have many of the good results ascribed to antipyretic measures been due to an action upon other factors in the disease than the temperature, but that fever in many affections is, of itself, a natural remedial agent. A recent case, reported by Dr. R. B. Christian before the last meeting of the Arkansas Medical Society (*Memphis Med. Month.*, June, 1899), illustrates the tolerance of the cerebro-spinal centres to extremely high temperatures. The case which was diagnosed as cerebral meningitis seems to have endured, for eleven days, an extraordinary fever without developing stupor, while delirium is only mentioned on a single day.

The patient, a woman of twenty-six years, of fair previous health, developed nausea, fullness of the head and a temperature of 105° F. On the following morning the thermometer registered 110° F. and broke. During the day the temperature fell to normal, rising again to 110° F. at night. During the following ten days extreme daily temperature variations occurred, the fever rising to 110--117°F. daily and finally reaching 118° F. The patient now lost consciousness, and, although the temperature did not again exceed 103° F. until a few hours before her death, she remained stuporous, death occurring twelve days later, or twenty-four days after the onset of the fever.

These extraordinary temperatures were verified by a number of thermometers used in both axilla and mouth, and we are assured by Dr. Vinsonhaler, secretary of the Arkansas Medical Society, that the case is entirely authentic and that a similar case was reported before the '98 meeting of the Society, where the temperature also reached 118° F.

BOOK-REVIEWS.

THE HYGIENE OF THE MOUTH: A GUIDE TO THE PREVENTION AND CONTROL OF DENTAL DISEASES. By R. Denison Pedley, F.R.C.S., Ed., L.D.S. Eng.; Dental Surgeon to the Godiva Hospital for Sick Children, Southwark, London. With numerous illustrations. London, J. P. Segg & Co., 289 and 291 Regent Street W.; Philadelphia, S. S. White Dental Mfg. Company.

This is one of the few books of the present day which cover more ground than their titles indicate. The author shows very clearly, by reports of numerous cases in children especially, that doing away with suppuration in the mouth by the removal or filling of carious teeth may rapidly cut short those stubborn diarrheas and also nervous affections dependent upon gastro-intestinal irritation, which were themselves presumably a consequence of infection from the source of pus formation in the mouth. The subject is discussed in two chapters, the first of which is devoted to "The Hygiene of the Mouth in Children in the Home, in the School and in the Hospital; With Some Account of the Relationship between Dental and Other Diseases."

Chapter II. treats of "The Hygiene of the Mouth in Adults" under various subheads, including especially the effects of carious teeth upon the general health and the methods of treatment. This brochure, or one like it, should be in the hands of every parent and every young person, especially those who have failed to receive proper instruction from their care-takers in these very important matters. The author advises that beginning in childhood tooth powders (various formulas for which he gives) should be used with a stiff brush *after every meal.* This free use of a stiff, close-fibered brush, coated with a more or less abrasive powder, if given, as is customary, an almost exclusively horizontal motion, is frequently harmful, and cannot be endorsed. The author wisely urges the routine examination of the teeth in every case of illness. Apart from some unusually bad proof-reading, which has suffered to remain such an unfortunate expression as "preventative disease" instead of *"preventable* disease," there is little in the book to invite criticism, though the author has quite ignored the fact that diseases of the teeth may be a result of excessive fermentation in the alimentary canal, as well as *vice versa.*

HAY FEVER AND ITS SUCCESSFUL TREATMENT. By W. C. Hollopeter, A.M., M.D., Clinical Professor of Pediatrics in the Medico-Chirurgical College of Philadelphia, etc. Second edition, revised and enlarged. Philadelphia, P. Blakiston's Son & Co. 1899. Price, $1.

The fact that a second edition of this book was required in less than a year from the appearance of the first, is evidence that it filled a want. The author has not only made an exhaustive study of the rather obscure subject of hay fever, but apparently has justified the strong wording of the title of his little treatise by having worked out and fully described what seems to be a really successful plan of therapy for the affection. His method turns mainly

upon a very rational yet simple local treatment of the upper air passages by antiseptic, emollient and protective sprays and applications begun several weeks before the time when the attack is expected to appear and continued during it till controlled. But at the same time he treats the underlying dyscrasia by appropriate measures, especially mechanical, hygienic and dietetic.

An Epitome of the History of Medicine. By Roswell Park, A.M., M.D., Professor of Surgery in the Medical Department of the University of Buffalo, etc. Based upon a course of lectures delivered in the University of Buffalo. Second edition. Illustrated with portraits and other engravings. 6½x9½ inches. Pages xiv.-370. Extra cloth, $2 net. Philadelphia, The F. A. Davis Co., Publishers, 1914-16 Cherry Street.

It is gratifying that this remarkably interesting work has within a year of its first publication reached a second edition—a fact not more creditable to the author than to the profession that has evinced such an appreciation of it. The gradual growth and development of the science and art of medicine throughout the long ages is described in this book simply and necessarily with great conciseness in order to condense such an immense subject into a single volume, and yet it must have for every properly constituted physician all the fascination of a romance. No man could read it and not be broadened and liberalized in his mental attitude toward the schisms which still distract and weaken, to some extent, the influence which our guild as a whole should exert. On the other hand, no man could study it carefully and continue to be a narrow-minded sectarian in medicine.

On the Study of the Hand for Indications of Local and General Disease. By Edward Blake, M.D., member of the Royal College of Surgeons, etc. Second edition. London, Henry J. Glaisher. 1899.

It is a few months only since we had occasion to commend the first edition of this unique work. The second edition has been so much enlarged and so thoroughly recast as to constitute virtually a new book. It is really remarkable that so very much of interest and of diagnostic value can be found in so small a part of the body as the hand, including the pulse. The latter is discussed in this work with a fullness and thoroughness quite unusual in modern treatises. In the olden times, when comparatively few instruments of precision were used in diagnosis, practitioners were taught to study the pulse much more carefully than is usual at present. Indeed it has been of late too much neglected.

A Manual of Otology. By Gorham Bacon, A.B., M.D., with an introductory chapter by Clarence John Blake, M.D. Philadelphia and New York, Lea Brothers & Co.

The student, for whom principally it was written, will find an excellent guide to the practice of Otology in this compact little volume. It contains but little that is novel in pathology or treatment, but what there is of the former is orthodox and sufficiently full, while the treatment is modern and complete. The chapters treating of the more frequent diseases of the ear are,

very properly, the most comprehensive, and it is these that the beginner will find the most helpful. It is scarcely likely that the recent graduate will undertake any of the formidable cranial operations that have become so prominent in surgical otology within the past few years; but if he is an enterprising and fearless young man with surgical aspirations, he will find in this manual a very satisfactory exposition of the indications for operation and of the operative methods that are at present in greatest vogue. The author's style is a little careless at times, but there is no ambiguity or timidity when it comes to the expression of an opinion. The book, without being profusely, is very well illustrated and the publishers have reason to be well satisfied with their part of the work.

Les Regenerations d' Organs. Par Le Dr. Paul Carnot, Docteur es Sciences, Ancien Interne des Hopitaux de Paris. Avec 16 Figures dans le texte. ("The Regenerations of Organs." By Paul Carnot, Doctor of Science, late Interne in the Hospitals of Paris. With 16 Illustrations in the Text.) Paris, J. B. Bailliere et Fils. 1 fr. 50.

This little brochure of 96 pages is an interesting and valuable exposition of biologic matters of the utmost importance in the science of medicine. Chapter I. is devoted to "Regenerations in General," describing the mechanism of regenerative processes in various animals. Chapter II. to the "Mesodermic Regenerations," including that of the blood, the hematopoietic organs, the vessels, connective tissue, bones, cartilages and muscular organs. Chapter III. discusses the "Epithelial Regenerations," including that of the nervous system, epidermic structures, mucous membranes and the glandular organs generally.

The Medical Complications, Accidents, and Sequelae of Typhoid or Enteric Fever. By Hobart Amory Hare, M.D., B.Sc., Professor of Therapeutics in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital, Laureate of the Medical Society of London, of the Academie Royale de Medecine de Belgique, etc. With a special chapter on the Mental Disturbances following Typhoid Fever. By F. X. Dercum, M.D., Clinical Professor of Diseases of the Nervous System in the Jefferson Medical College. Octavo, 267 pages, 21 engravings and 2 full-page plates. Philadelphia and New York, Lea Brothers & Co., Publishers. 1899. Cloth, $2.40, net.

Prof. Hare never writes without having something to say, and always says it well. This volume is timely, and will be most helpful to every physician in general practice, for every such physician must see many cases of typhoid fever, a certain proportion of which he would never be able to diagnosticate correctly if he depended solely upon the teachings which were universally in vogue in the lecture rooms and text-books until within the last few years. "Any case of fever which does not reach a temperature of 103° by the third day, cannot be typhoid," it was formerly taught. How false this was, most busy physicians have learned for themselves by a more or less bitter experience; but such a book as this, written especially to point out the frequency of the aberrant forms of the disease and to picture the many guises under which it may hide itself, must prove a real boon to the younger practitioners. The work is divided into

seven chapters, as follows: I., "General Considerations"; II., "Varieties of Onset"; III., "The Aberrant Symptoms, States, or Complications of the Well-Developed Stage of the Disease"; IV., "The Complications of the Period of Convalescence"; V., "The Conditions Which Ape Typhoid Fever"; VI., "Duration and Immunity to Second Attacks"; and VII., "The Mental Complications." The last, from the able pen of Prof. F. X. Dercum, is naturally an interesting and valuable discussion of this important phase of the subject. A rapid perusal of this excellent book suggests two points only which might be said to invite criticism, and these can be easily met by a few additional pages in the next edition, which is certain to be called for at an early day. In Chapter V. the differential diagnosis between a very mild or irregular form of typhoid and epidemic influenza with only slight involvement of the respiratory tract, is not given. According to our experience, this is often difficult to make during the first few days when the Widal reaction can rarely be obtained. Then, it would have added to the value of the work if Prof. Hare had given some advice as to the most successful methods of treating the various forms of typhoid fever which differ decidedly from the classical types. One certainly should not be expected to treat the markedly cerebral forms in the same manner as those in which the enteric symptoms are predominant, nor do the cases with almost no rise of temperature, and with constipation instead of diarrhea, require the same diet and therapy as the severer types. This omission is the more noteworthy, in view of the fact that the author shows from a large array of statistics that the cold bath method of treatment conduces somewhat to the occurrence of hemorrhage. The antiseptic method has not met with much approval at the hands of most teachers in the East at least, so that even in the typical cases it seems to be still an open question what is the best treatment. On one long-mooted point, however, to wit, the proper treatment of perforation, Prof. Hare affords needed light of a practical kind by quoting approvingly the advice of Keen and others that an abdominal section should be made in such cases with the least possible delay. The mechanical execution of the volume is entirely commendable.

Practical Materia Medica for Nurses, with an Appendix Containing Poisons and Their Antidotes, with Poison Emergencies, Mineral Waters, Weights and Measures, Dose List and a Glossary of the Terms Used in Materia Medica and Therapeutics. By Emily A. M. Stoney, Graduate of the Training School for Nurses, Lawrence, Mass., etc. Philadelphia, W. B. Saunders, 925 Walnut Street. 1899. Price, $1.50.

It is to be hoped that authors will not carry much further the enlargement of the titles of their books. Nurse Stoney has managed to get into the title of hers pretty much all of the table of contents. Nevertheless, she has done a real service to nurses generally. A careful examination of the volume shows little to criticise and much to commend. The materia medica part contains much more than nurses as a rule need to know and the information in the main seems to be accurate so far as it goes.

The author is particularly to be commended for warning plainly against the danger of giving the principal antipyretics and hypnotics in too large doses or for long periods, especially sulphonal. Next after care as to cleanliness and antisepsis, there is no point upon which it is more important to instruct

nurses very clearly. It would have been better if Miss Stoney had pointed out the dangers of trional with equal carefulness; but it would be asking too much to expect that a nurse writing for nurses should do more than most medical teachers writing on materia medica for physicians have yet done. In giving the antidotes to narcotic poisons, not enough stress is laid upon the importance of the prompt hypodermic injection of stimulants, especially of strychnin; indeed, we do not find strychnin referred to at all among the antidotes to such active poisons as aconite, antimony, nicotine, etc. Nevertheless, the book is full of valuable information, which is very conveniently arranged and classified so as to facilitate reference to it in emergencies.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart A. Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc. Vol. II., June, 1899. Philadelphia and New York, Lea Brothers & Co.

This volume is even better, if possible, than the initial one. It contains an article on "Surgery of the Abdomen, Including Hernia," by Wm. B. Coley; one on "Gynecology," by John G. Clark, one on "Diseases of the Blood, Diathetic and Metabolic Disorders, Diseases of the Spleen, Thyroid Gland and Lymphatic System," by Alfred Stengel, and one on "Ophthalmology," by Edward Jackson, together with a copious index. All these are excellent and well-nigh exhaustive accounts of the present status of the various subjects.

The Pathology and Treatment of Sexual Impotence. By Victor G. Vecki, M.D. From the author's second German edition, revised and rewritten. Philadelphia, W. B. Saunders. Price, $2.

In our age of "conventional lies" and hypocrisy, even among the members of the medical profession, a book on sexual matters is likely to meet with unfavorable criticism, no matter how well it is written or how well-meaning the author is. The book before us, however, is on a subject of great importance to the physician, and is not to be ranked with the numerous books containing piquant stories of sexual abuses, sexual perversion, etc. It discusses a disease too prevalent in modern society and far-reaching in its evil effects on the moral, mental and physical well being of the victim. The author, a physician of considerable experience and extensive erudition, treats this difficult subject in a manner which makes the book a valuable addition to the rather scanty knowledge possessed on the subject of impotence. Although not free from entirely useless references to the sensual side of the question, it treats it with frankness and originality. Many of the author's views may be found eccentric and distinctly disagreeable to the reader, yet the merit of the exhaustive chapters on the etiology and forms of impotence, and treatment, will more than counterbalance the shortcomings. The publisher has done his part well.

A. R.

Lord Lister and Surgery. By Robert Turner, M.A., M.D., F.R.C.S. Edin. London, Henry J. Glaisher. 1899.

This brochure of 28 pages embodies an account of Lister's great contribution to the surgical art. It is gracefully written and well worth reading.

Annual and Analytical Cyclopedia of Practical Medicine. By Charles E. deM. Sajous, M.D., and One Hundred Editors. Illustrated with chromolithographs, engravings and maps. Vol. III., Philadelphia, New York, and Chicago, The F. A. Davis Co., Publishers. 1899.

This volume is fully up to the standard of its predecessors, which is high praise. It is strong especially in its surgical features. The opening monograph on "Dislocations," and that on "Fractures," both by Lewis A. Stimson and Edward L. Keyes, Jr., are profusely illustrated and are exceedingly full and satisfactory. R. H. Sayre ably treats of "Hip-Joint Disease" in an article of over twenty pages with many fine half-tone pictures. Not less valuable is that on "Hernia," by Wm. B. Coley. Perhaps the best chapter in the volume is that on "Exophthalmic Goitre," by James J. Putnam. James Anders gives an excellent account of "Fatty Degeneration of the Heart," as well as valuable suggestions for its treatment. He recommends exercises of graduated activity, though he does not refer to the Nauheim resisted movements (Widerstandgymnastik) or other forms of Swedish movements which are extremely helpful in strengthening, in a safe and physiologic way, hearts weakened from whatever cause. Levison's exposition of "Gout" is thoroughly up to date, and the best we have seen lately. The same writer furnishes an account of "Indicanuria," which is at least better than is given in any of the text-books on urinary analysis, though less thorough than the great importance of the subject merits. The articles on various drugs are most interesting and complete, especially those on "Ether, Hydrastis and Ichthyol." The volume ends with a very satisfactory account of "Infantile Myxedema." The mechanical execution is on the same high plane as in the case of the previous volumes.

Forthcoming Books. The following books are announced for publication early in the fall of 1899, by Mr. W. B. Saunders: Volume I. of "The International Text Book of Surgery" (in two volumes), edited by J. Collins Warren, M.D., LL.D., and A. Pierce Gould, M.S., F.R.C.S. Eng.; "A Text Book of Embryology," by John C. Heisler, M.D.; "Diseases of the Nose and Throat," by D. Braden Kyle, M.D.; "The Treatment of Pelvic Inflammations through the Vagina," by W. R. Pryor, M.D.; "The Hygiene of Transmissible Diseases," by A. C. Abbott, M.D.; and "A Manual of Diseases of the Eye," by Edward Jackson, A.M., M.D.

PRACTICAL NOTES.

Shortcomings of the Surgical Treatment of Epilepsy. At the German Surgical Congress Kocher referred to the failures from the usual surgical methods employed in the treatment of epilepsy. The statistics of Graf and Braun show a successful result in only 2 or 4 % of the cases. Von Bergmann stated that operations were only successful in non-hereditary cases of epilepsy, and that the only reliable operation was excision of the cortical center, while a fatal issue may follow as late as 4 years after the operation.

A Mechanical Laxative. Upton (*Phila. Med. Jour.*, July 22, 1899) advises white or liquid petroleum in doses of 2 or 3 ounces by mouth, as a harmless and very useful laxative. It is absolutely non-irritant, does not distend the bowel and is claimed to diminish flatulence.

Gastric Secretions in Organic Heart Disease. Murdock (*N. Y. Med. Jour.*, June 17, 1899), from a comparison of the gastric secretion in 67 cases, 23 of which were his own, concludes that there is no constant relation between the condition of the gastric contents and any one form of organic heart disease. In his own cases, the cardiac condition seemed neither to preclude nor to interfere with the gastric treatment, several patients, by faradization, lavage, hygienic procedures and diet, recovering completely from the stomach affection.

Petroleum Emulsions are not Nutrients. The use of emulsions of petroleum in lieu of cod-liver oil for wasting diseases has led to some interesting experiments by Hutchinson, which are reported in the *British Medical Journal*. It was found that all of the petroleum, which was administered in the form of a well advertised emulsion, could be recovered from the feces. While the experiments demonstrate that this substance is not absorbed, the author admits the possibility of its being of some value from its local action upon the gastro-intestinal tract.

Liquid Air in Medicine. White (*Med. Rec.*, July 22, 1899) refers to the fact that various micro-organisms may be exposed for a considerable period directly to the influence of liquid air (312°F. below zero) without injury, and mentions a number of the uses of this new agent in medical practice. In such remote lesions as herpes zoster, sciatica, intercostal and facial neuralgia, instant relief is obtained by one application over the spinal end of the affected nerve. It is claimed that an abscess, boil, carbuncle or bubo in the early stage may be aborted by one or more thorough freezings; while when pus has formed the liquid air is a very useful local anesthetic. Valuable results are also asserted from its use, as a stimulant in chronic varicose ulcerations, chancroids, and other specific ulcerations. It may be applied in the form of a spray or upon a swab. Too intense or prolonged applications may, of course, lead to necrosis or gangrene, and the thorough freezing of a part may also render it so firm that it cannot be incised by the knife.

Treatment of Epithelioma. MM. Cerny and Trunecek have published at great length in the *Semaine Médicale* their treatment of epithelioma by daily applications of a solution of arsenic composed as follows:

Arsenious acid, xx grs.;
Proof spirit } ℥ iiss.
Water }

The result of these applications was a successive transformation of the cancerous tissue in sloughs which became detached, and finally left an ordinary granulating sore, which healed under the influence of antiseptic

treatment. No prejudice was caused to patients by the application of the arsenic, when care was taken to avoid touching the healthy skin. The pain caused by the action of the caustic was never so great as to oblige the patient to abandon the treatment. The curability of cancer by this method depended, however, on the degree of evolution of the neoplasm and on the seat of the lesion. As regards the first condition, it was necessary that the ganglions should not be indurated, and as to the second, the application of the toxic should be realizable. Such were cases of primary cancer of the teguments, the nose, the lips, the mouth, and certain limited lesions of the larynx. As to the duration of the treatment, it was impossible to fix any period with precision. Very small ulcerations only required 3 or 4 weeks to heal, while in other cases several months were necessary. However, it was sufficient to see the patient once or twice a week as he could apply the caustic himself. As to the action of the arsenical solution, the cancerous cells were first dehydrated by the alcohol, then their protoplasm became coagulated under the influence of the arsenic, degenerescence of the cells of the connective tissue followed, provoking a serious exudation, which determined in its turn certain alterations in the modified cancerous cells; finally, a distinct inflammatory line of demarcation was produced between the diseased and the healthy parts, after which the neoplasm became eliminated as a foreign body.—*Corres. Med. Press.*

MEDICAL NEWS AND MISCELLANY.

Cause of Napoleon's Death. Napoleon Bonaparte died at the age of 52, of cancer of the stomach, in May, 1821. His father had died at the age of 38 of the same disease. Napoleon was the son of a very young mother. She was possibly not 16 when he was born, and certainly not 20. Cancer is, I believe, more common in the children of aged parents than of young ones. We must, however, here bear in mind the inheritance and also the depressing and annoying conditions under which Napoleon's last years were passed. There can be little doubt that mental depression disposes the tissues to cancerous changes.—*Univ. Med. Mag.*

The Meeting of the American Medical Association. The semi-centennial meeting of the American Medical Association, held in Cleveland, June 3 to 9, 1899, was one of the most successful and representative gatherings in the history of the Association. The retiring president, Dr. Joseph M. Mathews, of Louisville, gave an address entitled "Our National Body: Its Purpose and Destiny." Among the other notable addresses was that by Dr. J. C. Wilson, of Philadelphia, "A Century of Medicine in America"; that by Dr. F. W. McRae, of Atlanta, upon some points in the surgery of the alimentary canal; and that by Surgeon-General Sternberg, entitled "Sanitary Lessons of the War." The officers elected for the ensuing year are: President, Dr. W. W. Keen, of Philadelphia; first vice-president, Dr. C. A. Wheaton, of St. Paul; second vice-president, Dr. E. D. Ferguson, of Troy,

N. Y.; third vice-president, Dr. G. M. Allen, of Liberty, Mo.; fourth vice-president, Dr. W. E. D. Middleton, of Davenport, Ia.; secretary, Dr. George H. Simmons, of Chicago; assistant secretary, Dr. J. A. Joy, of Atlantic City, N. J.; treasurer, Dr. H. P. Newman, of Chicago; judiciary council, Dr. J. D. Griffith, of Kansas City; Dr. J. E. Cook, of Cleveland; Dr. J. H. Baillache, of Washington, D. C.; Dr. J. B. Lewis, of Topeka; Dr. J. W. Irvin, of Louisville, and Dr. Frederick Holme Wiggin, of New York. The orators for 1900 are as follows: Addresses in Medicine, Dr. J. E. Witherspoon, of Nashville, Tenn.; address in Surgery, Dr. W. L. Rodman, of Philadelphia, Pa.; address in State Medicine, Dr. Victor C. Vaughan, of Ann Arbor, Mich. The ensuing session will be held at Atlantic City, N. J.

The William F. Jenks Memorial Prize. The fifth triennial prize of $500, under the Deed of Trust of Mrs. William F. Jenks, will be awarded to the author of the best essay on "The Various Manifestations of Lithemia in Infancy and Childhood, with the Etiology and Treatment." The conditions annexed by the founder of this prize are, that the "prize or award must always be for some subject connected with Obstetrics, or the Diseases of Women, or the Diseases of Children"; and that "the trustees, under this deed for the time being, can, in their discretion, publish the successful essay, or any paper written upon any subject for which they may offer a reward, provided the income in their hands may, in their judgment, be sufficient for that purpose, and the essay or paper be considered by them worthy of publication. If published, the distribution of said essay shall be entirely under the control of said trustees. In case they do not publish the said essay or paper, it shall be the property of the College of Physicians of Philadelphia." The prize is open for competition to the whole world, but the essay must be the production of a single person. The essay, which must be written in the English language, or, if in a foreign language, accompanied by an English translation, must be sent to the College of Physicians of Philadelphia, Pennsylvania, U. S. A., before January 1, 1901, addressed to Richard C. Norris, M.D., Chairman of the William F. Jenks Prize Committee. Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bearing the same motto and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay. The committee will return the unsuccessful essays, if reclaimed by their respective writers, or their agents, within one year. The committee reserves the right not to make an award if no essay submitted is considered worthy of the prize.

Surgical Instruments May Be Admitted Duty Free. A decision of much interest relating to the importation of surgical instruments is noted in a recent number of the *Boston Medical and Surgical Journal.* An assessment of 35% *ad valorem* having been made upon surgical instruments imported by the Massachusetts General Hospital, a physician generously contributed an amount sufficient to cover the legal cost of the case. The decision made by Judge Colt, of the United States Circuit Court, reversing that of the Board of General Appraisers, should be most satisfactory to hospitals and colleges importing surgical appliances.

"The hospital corporation contended, and the court held, that the surgical instruments which were imported for use in the hospital in its clinics and training school for nurses were entitled to entry duty free, under paragraph 585 of that act, as scientific instruments. The amount of the duty as assessed was $578. The court said: 'Looking at the whole of paragraph 585 and giving to it a construction in accordance with what seems to have been the intention of Congress, the term "scientific instruments" means instruments specially designed for use in any particular science, and which are principally employed for such purpose; and, surgery being a science, it covers the surgical instruments in question in this case, which were imported for the use of the Massachusetts General Hospital in its clinics and training school. The fact that such instruments are employed by surgeons in the practice of their profession does not make them mechanical instruments. Instruments of this kind, in our opinion, are scientific instruments within the meaning of the statute, until it is shown that their principal use is in the trades and arts. For example, an ordinary knife is a mechanical instrument, because its principal use is in the trades and arts, while a surgeon's knife, specially designed for use in surgery, and principally used for such purpose, is a scientific instrument.'"

Large Professional Fees. Recently (Editorial *Lancet Clinic,* July 29, 1899) Dr. D. I. Robinson, of New York, brought suit against a millionnaire client for $10,000 for ten visits, which, by the way, is not by any means the largest fee charged for medical services rendered men of large wealth. Not long ago a surgeon in San Francisco was voluntarily paid $30,000 for performing a successful operation for appendicitis. It is reported of Dr. Howard A. Kelly, of Baltimore, that for an operation on a mine owner's wife and 21 days' attention he was paid $21,000. Dr. Tiffany, of Baltimore, received $10,000 for an operation; Dr. Chambers, of the same city, $5,000 for operating for a stab-wound. Dr. C. T. Parks, deceased, of Chicago, received a fee of $10,500 for a surgical operation. Dr. Bernays, of St. Louis, received $5,000 for a single operation. No doubt this list might be extended, but not very much. In the practice of medicine $5,000 and larger sums are not very frequent fees in any man's practice; $1,000 fees are occasional, and more frequent, and yet these are exceptional. In the law, large fees are apparently much oftener paid, for which there seems to be a reason found in the valuation placed upon a human life. In some states the statutes place the valuation of a man at $5,000, beyond which, in case of death caused by accident, in which a corporation or individual is at fault, a greater sum cannot be recovered in a suit at law. Hence, it may be said, a doctor practices entirely on property valuations of $5,000 or less. In a New Jersey court a decision was recently rendered in which the life of a child was placed at only a few hundred dollars. The learned judge, commenting on his own decision, made a mathematical calculation of the amount of money it would cost to sustain and educate the child until adult life, when the $5,000 limit would be reached. In countries where life is cheap the compensation for services of physicians is correspondingly small. In the legal profession men are sometimes called in court to face and argue

cases where hundreds of thousands and even millions of dollars are at stake, and if a lawyer can preserve to his client a large sum, he feels that it is no more than right that he should have a liberal share of the fund so saved, and makes his charges accordingly. His client, feeling that half a loaf is ever so much better than no bread, cheerfully divides. The lawyer is dealing with large sums, often many times more in value than a hundred human lives [?]. Large fees in either profession only go to the few. The physicians of the United States who have in individual instances collected $1,000 fees are not numerous, while the great majority cannot say they have ever collected a $500 fee.

Surgical Hints. All hypodermic injections may be rendered less painful, and be more readily absorbed, if the active substance is dissolved in saline solution instead of plain water.

In nursing women, every inflammation of the breast and nipple must be considered as having a bacterial origin, and should be treated like any other local infectious process.

In alcoholic coma always investigate the bladder. It is apt to be very full. If there is no stricture, the urine would drain itself out after a while, but if prostatic or other stricture should exist a rupture of the bladder might take place.

In administering chloroform to patients who have to be placed upon the side, as in some obstetrical operations, etc., place them on the right side if possible, as the heart's action is much better under chloroform in that position, than it is when the left chest is compressed against the table or bed.

In men, the intense scalding during urination in acute gonorrhea may be relieved by urinating with the penis immersed in a vessel containing hot water. Women with gonorrheal urethritis may similarly be relieved by directing them to urinate while taking a copious hot douche, or while sitting in a warm sitz bath.

After having succeeded in passing a catheter through a stricture, after some trouble, it is better to wait for some hours before withdrawing it. If you do not you may have just as much trouble in introducing another, whereas a catheter left *in situ* for a day or so will dilate the canal enough to allow you to pass the constriction quite easily.

In ankylosis resulting from disease still existing, passive motion is harmful. The only manipulation allowable in such cases is for the purpose of placing the limb, if possible, in the most useful position. In deforming arthritis, for instance, knees should be straightened out and elbows bent to a rather acute angle, under anesthesia. Then use rest, with splints and ice bags to prevent inflammation.

In women climacteric hemorrhages sometimes occur as the result of vasomotor disturbances or of arterial sclerosis. It sometimes happens that several such hemorrhages take place prior to the final establishment of the menopause. Women at this period always attribute such an occurrence to the change of life, but the surgeon must invariably examine the patient on account of the strong chances of cancerous trouble.—*Int. Jour. of Surgery.*